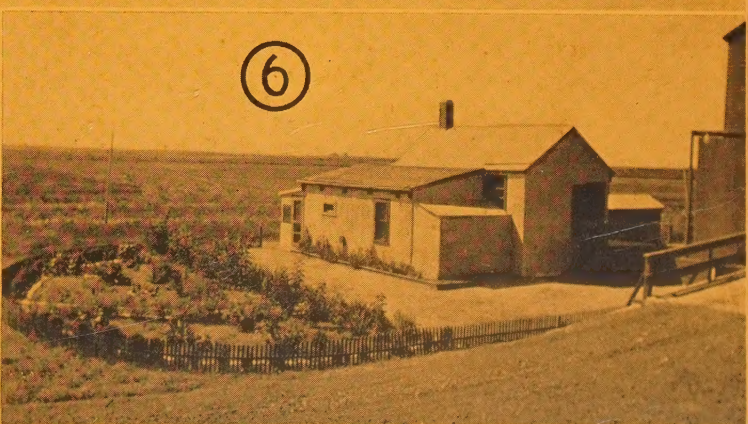
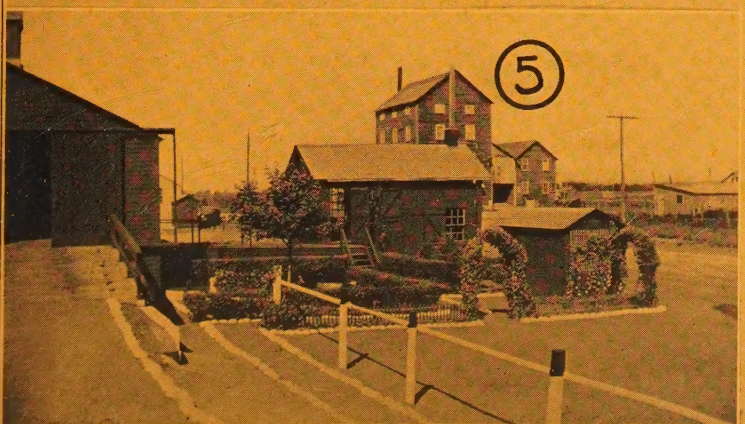
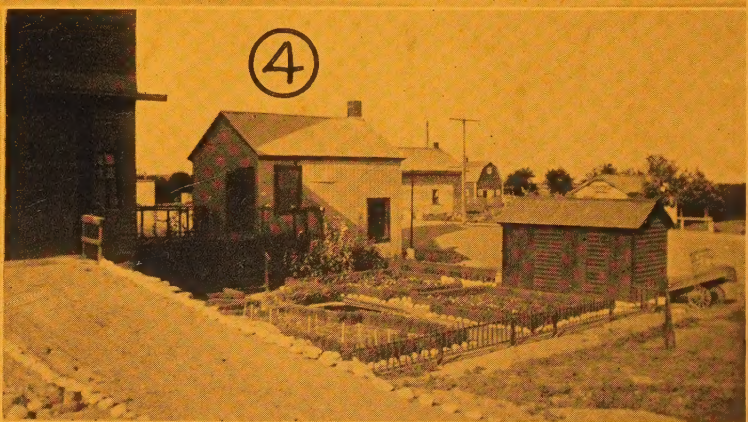
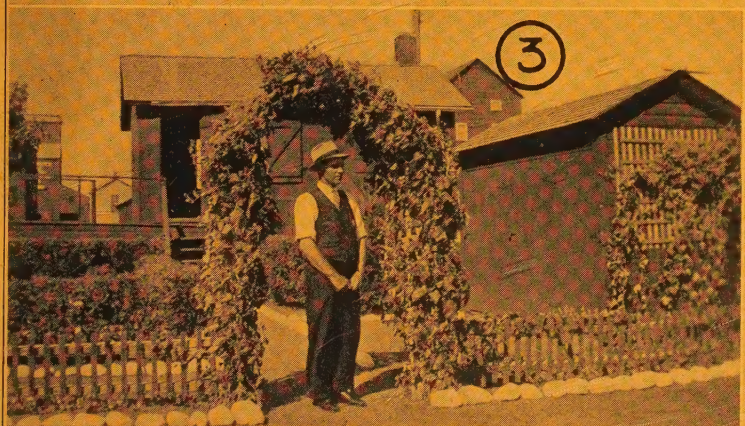
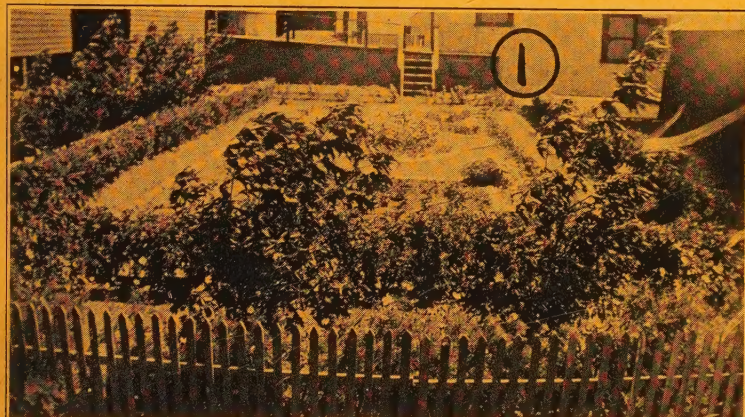


# GRAIN & FEED JOURNALS

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(See pages 290-291)



# Directory of the Grain Trade

In Organized Markets Only Members of the Local Grain Exchange Will Be Listed

*HAVING YOUR name in this directory will introduce you to many old and new firms during the year, whom you do not know or could not meet in any other way. Many new concerns are looking for connections, seeking an outlet or an inlet, possibly in your territory. It is certain that they turn to this recognized Directory, and act upon the suggestions it gives them. The cost is only \$10 per year.*

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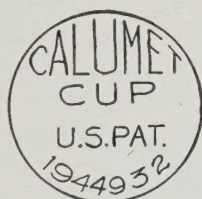
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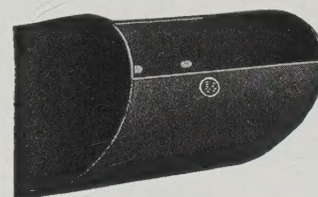
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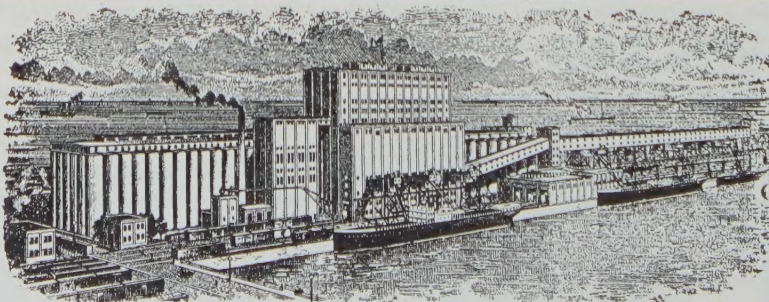
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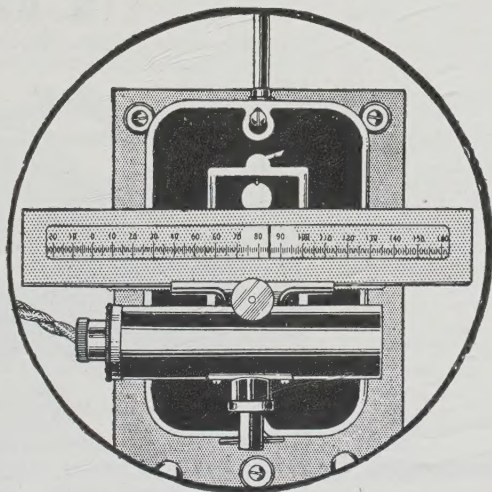
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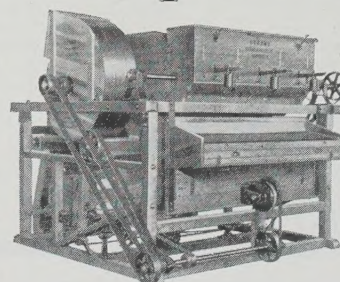
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**CHASE**—CMST.P.&P. Good agricultural section; only business here; possibilities of lines of trade without limit; 110-150 cars grain annually; new modern frame grain elevator, fully equipped; new store bldg. and office; frame corn crib and ear corn elevator; feed and cement shed, frame coal shed; all bldgs. in good working condition and good physical condition; complete stock of usual sidelines; competition friendly.

Each of the above properties have always proved successful and profitable. To close estate they will be sold at only a fraction of their replacement value. Investigate them at once.

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**CONCRETE ELEVATOR**, 15,000 bus. cap., in good grain territory with warehouse room, popular location on highway and on main line of M. & O. and M.I. railroads. Cazel Feed & Seed Co., Sparta, Ill.

**COLORADO**—Grain and bean elevator, warehouse, electric powered, good grain, livestock country; 55 mi. to Colorado Springs; great possibilities mixed feeds; crop conditions at present favorable. Address 84G9, Grain & Feed Journals, Chicago.

**COLUMBUS, IND.**—50,000 bus. capacity grain elevator; located in town of 16,000 population with surrounding country of fertile, river bottom farm land; brick structure, ample room for mill or soybean plant; on P.R.R., Big Four facilities. Death of owner, reason for selling. Address 84F10, Grain & Feed Journals, Chicago.

**SOUTHEASTERN INDIANA**—College Corner, Ohio, postoffice; state line town of 1,000 property in Indiana; small electric powered elevator built 1932; speed and convenience built in as answer to recent developments in business. Good coal, grain, feed, feed grinding and mixing business. Two delivery trucks, electric coal conveyor, truck scales, other equipment; modernized dwelling ideally located adjacent to elevator; business has been under the same name since 1882; much good will. An opportunity of getting into a good going business at low capitalization. Reason for sale, death of owner. Fred Miller Co., College Corner, Ohio.

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In the center of the "White Spot." To close estate, modern concrete elevator for sale, located in fast-growing No. Texas town, 60,000 population. Small down payment, balance 5%. Concrete capacity, 270,000 bus., with wooden auxiliary storage of 100,000 additional; modern feed mill and large warehouse in connection; fast handling head-house with capacity for million or more bus. storage; ample room for construction flour mill unit; site 350x150 ft. Excellent flour and feed transit and distributing point. Very promising grain prospects this year. For additional information wire or write Dwight Dill, 506 Santa Fe Bldg., Dallas, Texas.

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**SOUTH CENTRAL ILLINOIS**—Splendid 400 bbl. four story brick flour mill; good transit, large fireproof warehouse, ample grain storage; large increase in soybean acreage; this crop and buildings well adapted to soybean equipment; present owners might participate in new undertaking if properly financed. Address 84G16, Grain & Feed Journals, Chicago.

## FOR SALE OR TRADE

**CAR LOT** feed business in garden spot central west doing good business. Address 84F8, Grain & Feed Journals, Chicago.

**ILLINOIS**—Grain, coal and feed business and nice home on own land; in good town within 60 miles of Chicago; has 81,000 bus. gov't sealed corn on premises. Will exchange for land of equal value in Illinois or Indiana. James M. Maguire, 6440 Minerva Ave., Chicago.

## BUSINESS OPPORTUNITIES

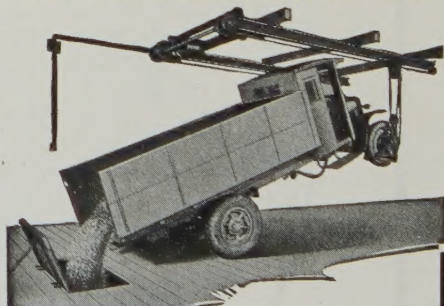
**SOUTHWESTERN INDIANA**—Long established 100 bbl. Nordike & Mormon flour mill; feed equipment, grain elevator in connection, with capacity of 1500 bus.; in heart of wheat and corn belt; two railroads, good schools in town of 2000. Address 84C7, Grain & Feed Journals, Chicago.

**GRAIN & FEED MILL** for sale; an offering of unusual merit; modern mill, 60 ton capacity, 8 hours center of large Puget Sound dairy and poultry district, real advantages in distribution and manufacture. Now in operation. Details upon request. Address 84G14, Grain & Feed Journals, Chicago.

**THE WANTED-FOR SALE DEPARTMENT** OF GRAIN & FEED JOURNALS is a market place where buyer and seller, employer and employee, and those offering investments can meet to their mutual advantage and profit and it will pay every subscriber to give these columns a close study twice each month, because of the constantly changing variety of opportunities seeking your consideration.

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**SALESMEN**—Excellent sideline; sell attractive counter display card. "Di-fast" rat killer. Write Standard Products, Napoleon, Ohio.

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**FOR SALE**—Affidavit, Atlas Sorgo, Good Color and Good Germination. Northwest Iowa Seed Co., Hawarden, Iowa.

**RED CLOVER**, 99.5% plus purity, no noxious weed seed, sacked in bushel bags, \$9.00 per bushel at Ipava, Ill. Write, or call Ipava Farmers Elevator Co., Ipava, Ill.

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**CORN CUTTER** & Grader—has motor—used very little. 84G5, Grain & Feed Jnls., Chicago.

**MIRACLE** cold process molasses mixer and pump in good condition. Cazel Feed & Seed Co., Sparta, Ill.

**FEED MIXER**—one ton—floor level feed—has motor—good as new. Write 84G7, Grain & Feed Journals, Chicago, Ill.

**HAMMER MILL** with 25-h.p. motor and all attachments. Priced to sell. Write 84G8, Grain & Feed Journals, Chicago, Ill.

**FEED GRINDER** and Crusher; No. 89 Clipper Cleaner; Pulleys, Bearings and Bucket Elevators. McLaughlin, Ward & Co., Jackson, Mich.

**FOR SALE**—Rebuilt Attrition and Hammer Mills, Mixers, Corn Cutters, Engines, Motors, Etc. Weaver Sales Corp., Corn Exchange, Minneapolis, Minn.

**STRONG-SCOTT** Safety Manlift for grain elevator; 13 ft. lift between floors, more cable can be added. Used only few months in home for invalid. Can include all lumber and gates. Name your price or write for details. Krueger's Cash Grocery, Wykoff, Minn.

**COMPLETE PLANT**, including No. 5 Jay Bee hammer mill, horizontal feed mixer, magnetic separator, large pit corn sheller, Union Iron Works corn and cob separator, Sidney combined sheller and cleaner, Draver feeders, steam corn dryer, dust collectors, piping, metal spouts, two-way baggers, bucket elevators, screw conveyors, shafting, bearings, pulleys, belts, sprockets and chain, electric motors from 3 to 75 h.p. This plant was recently built and never operated; will sell as whole or by piece. Anyone in need of machinery for grain or feed plant, contact me at once. Cliff Buzick, Bardstown, Kentucky.

**MACHINES FOR SALE**

**FEED MILL** No. 40 Fairbanks engine 15 h.p. John Justin, Rice, Minn.

**FEED MIXER** for sale, has motor, and a late machine. Need space. Will sacrifice. Write 84G6, Grain & Feed Journals, Chicago, Ill.

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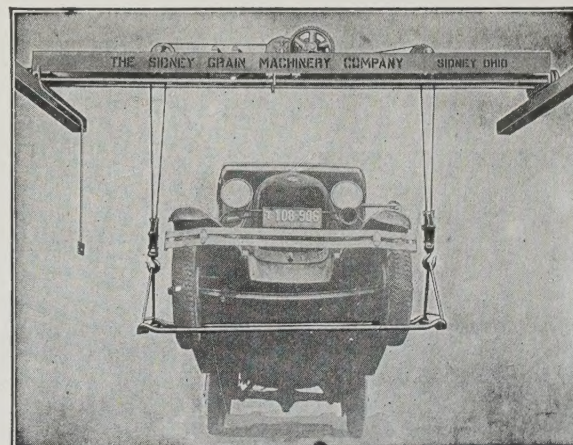
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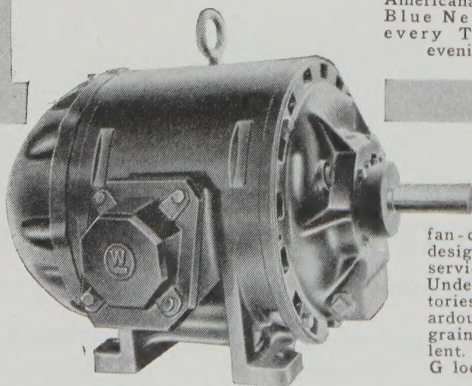
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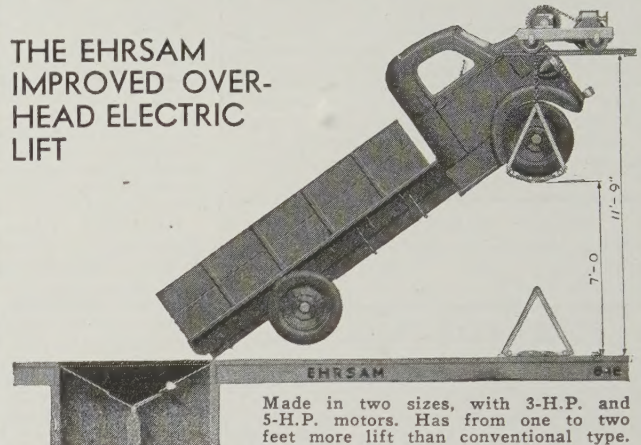
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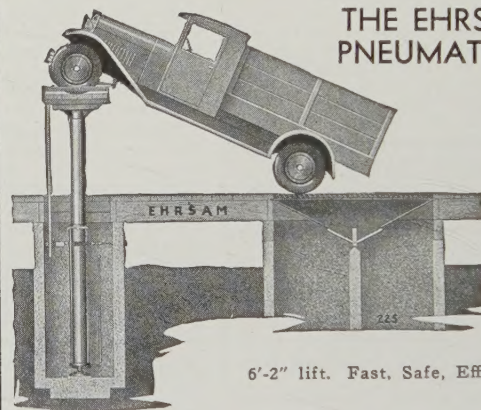


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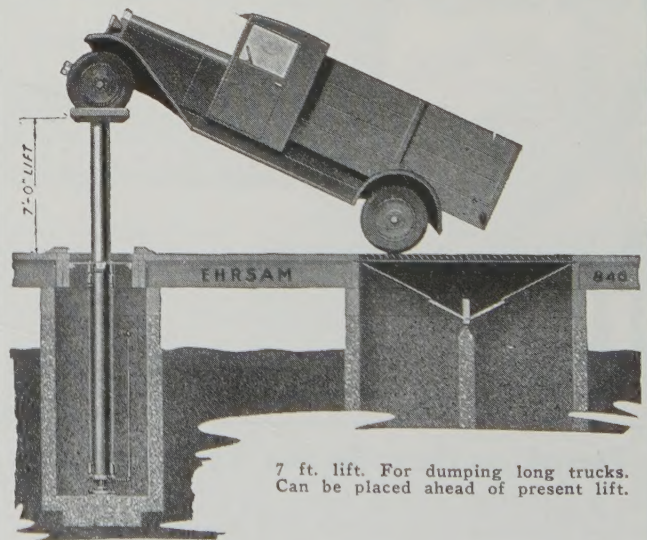
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# GRAIN & FEED JOURNALS

CONSOLIDATED  
INCORPORATED

332 S. La Salle St., Chicago, Ill., U.S.A.  
Charles S. Clark, Manager

A merger of  
**GRAIN DEALERS JOURNAL**  
Established 1898

**AMERICAN ELEVATOR &  
GRAIN TRADE**  
Established 1882

**THE GRAIN WORLD**  
Established 1928

**PRICE CURRENT - GRAIN REPORTER**  
Established 1844

Published on the second and fourth Wednesdays of each month in the interests of better business methods for progressive wholesale dealers in grain, feed and field seeds. It is the champion of improved mechanical equipment for facilitating and expediting the handling, grinding and improving of grain, feeds and seeds.

**SUBSCRIPTION RATES** to United States, Canada and countries within the 8th Postal Zone, semi-monthly, one year, cash with order, \$2.00; single copy current issue, 25c.

To Foreign Countries, prepaid, one year, \$3.00.

**THE ADVERTISING** value of the Grain & Feed Journals Consolidated as a medium for reaching progressive grain, feed and field seed dealers and elevator operators is unquestioned.

Advertisements of meritorious grain elevator and feed grinding machinery and of responsible firms who seek to serve grain, feed and field seed dealers are solicited. We will not knowingly permit our pages to be used by irresponsible firms for advertising a fake or a swindle.

**LETTERS** on subjects of interest to those engaged in the grain, feed and field seed trades, news items, reports on crops, grain movements, new grain firms, new grain elevators, contemplated improvements, grain receipts, shipments, and cars leaking grain in transit, are always welcome. Let us hear from you.

**QUERIES** for grain trade information not found in the Journal are invited. The service is free.

CHICAGO, ILL., APRIL 10, 1940

A STRAW VOTE of the corn eating rats of the middle states gives an overwhelming majority in favor of the continuation of liberal loans on all corn stored in open cribs.

MICHIGAN, like some other states, strives to protect unwary buyers of mortgaged property and punishes quite severely persons found guilty of disposing of mortgaged grain. If all states had similar laws, fewer country grain buyers would be called upon to pay twice for the same lot of grain.

SCALE WRECKERS who have long imposed upon owners of truck scales east of the Mississippi are now swindling elevator operators of Oklahoma and other southwestern states so it behooves all scale owners to keep on the lookout for these impostors and investigate their connections before permitting them to touch their scales. Many scale owners have found to their great distress that the so-called scale repairers do more harm than good.

THE RULING by the retailers occupational tax division that after Apr. 1 the sales tax must be paid on merchandise shipped into the state of Illinois if the sale is made within the state enunciates no new principle of law. The tax is upon the occupation of selling, and the origin of the goods within or outside the state is immaterial.

REFRIGERATOR service is now supplied to many Kansas farmers by country elevator operators who have installed a locker storage plant and facilities for chilling any products the farmer stores. The very fact that a number of such plants have been installed would seem to prove that elevator operators have found the service profitable.

A COUNTY A.A.A. com'ite at Ida Grove, Ia., recommends that the sleeve be rolled up to the shoulder and the arm thrust down into the government corn bin to find out if the corn is heating. More convenient is the probe-type grain thermometer, encased in steel armor plated with copper, nickel and aluminum so as to be rust proof, and with iron-pipe extensions to reach any depth.

OWNERS of corn stored in open cribs will have a deep sympathy with North Carolina farmers who lure big black snakes to guard their corn from rats. The trouble is that some thoughtless visitors kill the snakes, then the rats hold a carnival and invite all their relatives into the feast. Corn growers who have stored grain in sealed cribs have discovered other hazards, but none of them interfere with the rats' holiday.

WOLF has been cried so many times by inflation alarmists that we are likely to fail to recognize the animal when it arrives on the Board of Trade among the bulls and bears. Aside from a few silver coins our currency is purely fiat money, having no relationship to the tons of gold buried in a Kentucky hole in the ground. Once pried loose from our past customary level, prices may fluctuate with the greatest instability, unless Congress heeds the suggestions of New York bankers that gold be paid out on certificates and the metal be permitted to circulate as coin.

THE BURNING of the well established grist and feed mill at Lisburn, Pa., recently, upon which there was no insurance emphasizes most pitifully the folly of any property owner carrying all the risk of complete destruction when other property owners stand ready to share in the loss. This plant had only recently been equipped with a new modern Diesel power plant at an expense of \$3,500 so that the loss with a generous stock of wheat and flour wiped out nearly \$70,000 worth of property. The cost of insurance in reliable companies is not so burdensome as to forbid all keeping well protected against heavy losses.

THE NEW federal seed law places such heavy penalties on truckers who distribute dirty untested seed across state lines that few nomadic peddlers are disposed to jeopardize their freedom by attempting to sell any seed.

INCREASED demand by the warring nations of Europe for wheat seems certain to wipe out all excuses for any government lending money on wheat. The increased demand seems sure to boost the price above all so-called parity prices.

SEED DEALERS handling hybrid corn are learning to discriminate against varieties not known to be adapted to the section where they intend to distribute. Last year's experience brought some disappointing results because the hybrids planted were picked at random.

NOW THAT the CCC has taken the precaution to move some of its shelled corn stored in steel bins, it has discovered that the shoveling of corn from bins to trucks is slow and expensive and even after the trucks deliver the corn to an elevator for loading into box cars, the CCC is under additional expense for loading.

SHIPPERS of soybeans who have experienced trouble with beans being split while being spouted into cars will be interested in the practice of a terminal elevator superintendent who explained at the Toronto meeting that he prevented splitting of beans by plugging stream at bottom of spout until spout was filled, then turned in the full force of the distributor and kept loading spout filled full length so as to reduce the percentage of splits.

EVERY DAY the question is asked will the AAA persist in paying 18c a bushel for using its own steel bin storage for grain or will it be willing to pay the regular established elevator owner a reasonable compensation for storing and caring for its grain? No one has yet presented any logical reason for the government buying steel bins when established elevators with modern mechanical facilities for quickly turning grain are available for handling all the government's grain.

ANOTHER Missouri mill and elevator has been sacrificed to the paid incendiary who with his son has confessed. While circumstances often remove all doubt as to the cause of mysterious fires occurring between days, the night owls continue to discover them, but generally too late to save the property. Everyone is convinced the mill and elevator at Aurora, Mo., was another case of arson, because three separate fires were discovered in different parts of the plant on the same night. It is evident that the only safe plan to pursue when hate and spite are abroad in the land, is to keep well insured as well as safely guarded from trespassers.



MICHIGAN elevator dealers are surely preparing to treat farmers' seed grain for smut as during the past two weeks we have received notices from that state of at least twenty installations of a well-known seed grain treater. That means better crops for the farmers and more grain for the elevator man to handle.

ONE GRATIFYING feature of the increasing adoption of sideline business by country elevator operators is that many are becoming real merchandisers and brightening up their display rooms so as to impress all farmers with their improved facilities for serving them with better feedstuffs and ingredients. Experience has proved beyond doubt that a clean, attractive display of merchandise will always promote sales.

GRAIN SHIPPERS who suffer unexpected shortages in their shipments will find an explanation of at least one shortage in our "Leaking in Transit" column this number. In this case the thieves had enough sympathy for the shipper to attempt to plug the auger hole made in the car floor with waste. Inasmuch as the car initials and number are given in our report, it may explain the cause of the shortage in your last shipment.

THE GOVERNMENT is holding over 14,000,000 bus. of wheat as crop insurance premiums and paying heavy storage charges thereon, all of which could be more than saved by buying the July future at one cent less than May delivery. The government can not know in advance where the crop will fail and most of its holdings will be out of position to deliver as indemnity altho they are well distributed at 97 locations from Oregon to Indiana, and from Texas to Minnesota. By abandoning its policy of holding cash wheat and utilizing the modern facilities of the futures markets the saving of over \$1,000,000 a year would cut down by that much the loss under which it is now operating.

IF ANYONE interested in the soybean trade has discovered any logical reason for the grading of soybeans being entrusted to the hay division of the Bureau of Agricultural Economics, then it should be known to the members of the grain trade. All grading of grain has been done by experienced inspectors who have been licensed by the federal department and to the satisfaction of the grain dealers who are now handling the marketing of all soybeans. It would greatly simplify the marketing of beans to have the grading supervised by the same inspectors who have long supervised the grading of grains, so it is very easily understood why the Peoria Board of Trade has joined with other grain marketing agencies in demanding this service to be transferred to the agencies now grading grain.

REPORTS of cars arriving in central markets leaking grain reflects a carelessness in cooping cars that is sure to result in losses to shippers who fail to cooper carefully, weigh all shipments accurately and follow up their claims for shortages persistently.

THE AAA has its heart set on a marked reduction in the corn acreage for 1940, but, of course, the farmers of the corn belt will make every endeavor to select good hybrid seed which can be depended upon to give a large yield. It may be some will use more fertilizer than usual, although they do reduce the acreage planted as the AAA desires.

THE FUMIGATION of a Buffalo flour mill last week with hydro-cyanic acid gas was entrusted to a fumigating crew who had the plant surrounded by police for thirty-six hours so as to prevent anyone gaining admission and breathing the deadly fumes. New methods of fumigating infested grain is fully described elsewhere in this number, so the work can be undertaken without a police guard and without danger to human lives.

THE GERMINATION of many lots of choice oat and soybean seed is so low that seed dealers are scouring the country to obtain desirable seed which has higher germination. Some are recommending the planting of double the usual amount of seed in hope of obtaining a better stand. Germination tests are needed to determine with any accuracy the results to be obtained from any lot of seed. Such tests can readily be conducted in the elevator office or in a laboratory and the final results of the season's work greatly improved.

JUDGING from the complaint of a southern Indiana miller, some misguided handlers of wheat are loading their grain with kerosene oil in hope of exterminating weevil. This treatment is more expensive in the application than any other bug exterminator known to the trade, because while it may kill some weevil, it is sure to destroy the milling value of all wheat treated. The many practical fumigants recommended in our profusely illustrated article on grain infesting insects and their remedies nullifies all old excuses for using kerosene.

COUNTRY ELEVATOR operators seem disposed to insist upon charging 4c per bushel handling charge for wheat owned by the government and 9c per bushel for storing twelve months while on corn they seem agreed that a 3c handling charge with 8c a bushel storage charge for twelve months will save them from bankruptcy.

COUNTRY grain buyers of some sections are experiencing much difficulty in keeping track of tenants who have borrowed money from the government on farm sealed grain. Some of the county farm administrators have supplied cautious grain buyers with lists of farmers whose grain is covered by lien. Why not get a copy of the list and stop worrying?

OCEAN freight rates have risen exorbitantly under pressure of submarine sinkings. It is said 85 cents per bushel is paid on wheat from Argentina to Europe; and our own Pacific Northwest is complaining of lack of ships to carry away the wheat. In Australia wheat is overflowing regular and makeshift storage for want of vessels in which to export. If this situation continues it will result in a domestic car shortage, the rails being called upon to carry freight ordinarily entrusted to the boats. Owners of ocean tramp steamers bought before the war for \$100,000 are refusing \$400,000.

OUTSTANDING commendable practices of any great citizen in small communities invariably becomes contagious and our story of the determined and successful efforts being put forth by the country elevator managers of western Canada has met with such gratifying success that many communities have invested in fire fighting apparatus and placed the elevator manager at the head of their fire brigade. This is a splendid investment in good will, because it enlists the hearty support of the entire community in all fire prevention activities and the elevator managers become leaders, so that their campaign for better care of the property entrusted to them soon proves a splendid investment for the elevator owners as well as a permanent asset for the community which becomes fire prevention minded.

## SUCCESS

He has achieved success who has lived well, laughed often, and loved much; who has gained the trust of pure women and the love of little children, who has filled his niche and accomplished his task; who has left the world better than he found it, whether by an improved poppy, a perfect poem, or a rescued soul; who has never lacked appreciation of Earth's beauty or failed to express it; who has always looked for the best in others and given the best he had; whose life was an inspiration; whose memory, a benediction.—Bessie Stanley.



## Electric Capers

Workers in elevators using electric power need to exercise extra vigilance to avoid unexpected shocks. Some time ago the manager of an elevator at Irwin, Iowa, was doubly surprised when approaching the house to begin the week's work he found the machinery running full blast. Rushing to his cut off switch, he found that a careless sparrow had alighted on the switch and pressed it down so as to turn the current into the house motor, but the poor sparrow was electrocuted in its attempt to use the switch for a perch.

Last week, a Kansas dog rushed into an iron clad elevator which had provided a support for a sagging power wire and fell dead. The whole plant was surcharged with electricity but fire had not yet started.

The Iowa elevator has now enclosed its cut off switch in a fire proof box and its position is reversed so that any unusual weight will throw switch out of contact if it moves it. The iron cladding of the Kansas elevator has now been grounded and the power line rehung.

Vigilant inspections and caution at all times saves both lives and property.

## Beware of Insect Damage

Weather and moisture conditions during the past season have been unusually favorable for the breeding and multiplication of weevil. To escape heavy loss from insect infestation holders of grain must take every step to protect their property, by sweeping up and removing all accumulations of damaged grain in which insects delight to breed, and by fumigating valuable grain in which it is merely suspected that the weevil have begun to work.

Out of the several excellent methods of exterminating insects developed by research chemists of leading chemical industries in recent years the grain dealer can easily find one that is readily adaptable to the conditions in his plant. The manufacturers of the insecticides furnish complete instructions and, when necessary, sell or rent the equipment required in application of the chemical.

Anyone of average intelligence can be trusted to apply the fumigant after reading the instructions, which in the case of cyanides must be rigidly followed to prevent loss of life.

The fumigants described elsewhere are safe to use and from the description the elevator operator can choose that best adapted to the conditions in his plant. Others, not so well known should be avoided as they may injure the grain or leave a commercially objectionable odor, forcing the official grain inspector to make a note of the fact. Such grain sells at a discount. None of those described, when used as directed, have any bad effect on the grain.

## Area of Production

The 7-employee limit and the small territory included are working a hardship on many grain elevator operators.

Granting that the purpose of the law was to relieve those serving the farmers directly from the burden of the wage and hour requirements it would seem to be the duty of the administrator to expand this interpretation to embrace all grain producers tributary to a certain elevator regardless of distance or the number of men employed.

If the representatives of the organized grain trade now working at Washington for a modification of the interpretation are unable to obtain a more liberal definition it may be advisable to try for an amendment to the act itself, basing the exemption upon the character of the service performed.

## Hedging Losses Deductible from Income Taxes

The Bureau of Internal Revenue long ago ruled broadly that merchants and manufacturers employing hedging transactions as an insurance against loss due to fluctuations in the price of a commodity may deduct from their income any loss resulting when the hedge is closing out.

This still is true, altho careless readers of the decision Feb. 6, 1940, by the U. S. Board of Tax Appeals feared that its denial of the deduction of hedging loss in the case of the Farmers & Ginners Cotton Oil Co. would apply to hedging generally and reverse the Bureau of Internal Revenue. Their fears had some ground from the fact that the Cotton Oil Co. actually was hedging, tho the Board of Tax Appeals held otherwise.

The Cotton Oil Co. made and sold only crude cotton seed oil, which can not be kept in store without spoiling. Its hedge was made in refined oil futures on the New York Produce Exchange. The Board held it was not a hedge because the trade was in refined oil, not in the crude, in which the company was doing its regular business.

This results from the Bureau's definition of capital assets as follows:

"Capital assets means property held by the taxpayer, but does not include stock in trade of the taxpayer, or property held by the taxpayer for sale to customers in the ordinary course of his trade or business."

Therefore the refined oil was a capital asset, so that on its loss of \$24,000 the Bureau allowed only \$2,000.

This ruling does not affect grain processors such as millers and feed manufacturers, since their hedge on the Board of Trade is not made in a capital asset but in the wheat, corn, oats, etc., future corresponding to the cash article they actually handle.

The decision is an argument in favor of increasing the number of commodities

dealt in for future delivery on the exchanges so that processors may find a hedge that permits deduction of loss from income.

## Shipper's Recovery for Flood Loss

The Wabash Elevator Co., Uniontown, Ky., loaded 2 cars of corn Jan. 22, 1937, and notified agent of the Illinois Central Railroad at Morganfield between 9 and 9:30 a.m. that the cars were ready to be shipped.

The Ohio River was rising, and it was apparent Uniontown was going to be flooded. The agent at Morganfield signed the two Bs/L, and tried to get the cars moved out of Uniontown. Testimony was that the cars could have been moved from the elevator up until the 25th or 26th of January. The Illinois Central had no train in Uniontown after early in the morning of Jan. 22.

The court instructed the jury: "If you do not find from the evidence that said cars of corn were accepted by the defendant for transportation but do find that the defendant converted the said corn to its own use by selling same, you should then find in favor of the plaintiff the reasonable market value of the corn so converted at the time of its conversion, to-wit: Feb. 14, 1937, which finding should be measured by the number of bushels of corn you may find from the evidence to have been in said cars, multiplied by its reasonable market price per bushel."

The corn was damaged by water in the flood, and was sold by the railroad company at Henderson for 35 cents per bushel.

The elevator company claimed \$1.04 per bushel on 2,550 bus. The jury awarded \$735 on 2,100 bus at 35 cents per bushel. The Henderson Elevator Co. claimed there was only 1,507 bus. in two cars, but the jury assumed they were loaded to within one foot of the top. The judgment of the Circuit Court of Union County in favor of the Wabash Elevator Co. was affirmed June 13, 1939, by the Court of Appeals of Kentucky.—130 S. W. Rep (2nd) 76.

**Pana, Ill.**—Farmer Walter Klentworth has equipped his new tractor with a radio so that he can listen to market broadcasts while working in the fields, and stop long enough to haul a load of wheat to the elevator if the price is right.

The U. S. Maltsters Ass'n of Chicago, charged by the Federal Trade Commission with combining to fix prices of malt, had hearings scheduled for Apr. 10 at New York and Apr. 12 at Philadelphia, before Trial Examiner Robert S. Hall.

## Leaking in Transit

Grain dealers can help brother sufferers in the collection of claims for loss by reporting to Grain and Feed Journals, Consolidated, for free publication, car initials, number, place, date and condition of car seen leaking grain in transit.

Recently we have received reports of the following leaking or bad order cars:

**B. & O. R. R. 273621.** In cooping this car for a shipment of corn, we found a two inch auger hole thru the floor which had been stuffed with car bearing waste. Doubtless, the shipper who loaded this car with grain recently suffered a heavy loss. While the car is in perfect condition otherwise, the hole is large enough to permit a lot of grain to run out.—C. W. Parry (Chenoa, Ill)



## Asked—Answered

[Readers desiring trade information should send query for free publication here. The experience of brother dealers is most helpful. Replies to queries are solicited.]

### Buying Farm Sealed Wheat?

**Grain & Feed Journals:** Some farmers here have wheat that is covered by government loans, that I would like to buy. They can not pay off the loan without getting pay for the wheat. How is such a transaction handled, so I can get the wheat?—J. F. Martin.

**Ans.:** By making the checks payable one to the holder of the note and the other to the farmer for his balance the deal can be made thru the county A.A.A. com'ite. The check to the loan agency should include loan charges. The com'ite then will authorize delivery of the wheat.

Without such prior sale and payment it is possible for the county com'ite to authorize the farmer to deliver the wheat to the local elevator for sale, when the elevator operator has been notified by the county com'ite that it is mortgaged wheat and the buyer agrees to transmit thru the county com'ite sufficient funds to pay the full amount of the loan and charges.

### Government Corn in Iowa

Ron Kennedy, sec'y of the Western Grain & Feed Dealers Ass'n, has compiled, from the records of the Iowa State Agricultural Conservation Com'ite, a report for each county in the state of the quantity of government corn, sealed or resealed, on farms Mar. 1, 1940, with separate statistics on the amount stored for the government in country elevators and in steel government bins, the latter as of Mar. 23.

In 1,141 country elevators Mar. 1 were 9,534,566 bus. shelled corn, of which 3,977,830 bus. was pooled, 5,556,736 was loan corn, 4,874,594 was 1938 shelled and 682,156 bus. was 1937 shelled. A few country elevators in four counties held 13,858 bus. 1938 ear corn.

The steel bins, 14,304 in number, contained on Mar. 23, 29,678,577 bus., of which 3,915,023 was 1937 shelled and 25,915,169 bus. was 1938 shelled. Kossuth County alone has 439 steel bins. On farms was 103,409,517 bus. Mar. 1.

The total loan and pooled corn in counties (all positions) was 122,830,874 bus. There has been shipped to terminals and sub-terminals 3,081,169 bus. The total loan corn in all positions Mar. 1 was 90,273,667 bus.

Since most of the corn is consumed in the county where grown, the loan corn represents a very large percentage of the crop ordinarily entering commercial channels and giving employment to transportation agencies and merchandisers. Last year's corn crop of Iowa was officially estimated at 503,776,000 bus.

### Washington News

H.R. 8889, by Larabee, would amend the crop insurance act to cover corn.

The Musica-Patman bill to tax chain stores out of business provides a tax on chain stores at rates which increase according to the number of stores operated. The rate thus arrived at is then multiplied by the number of states in which the chain operates. The bill, while designed to abolish all chain stores, would also place a heavy burden on line elevator companies.

Certification of more than 14,000,000 of the people for benefits under the stamp food distribution plan of the A.A.A. was appalling declared Senator O'Mahoney in opposition to Senator La Follette's resolution to increase the appropriation from \$83,000,000 to \$113,000,000. The \$100,000,000 now in the fund guarantees the continuation of the stamp distribution plan only until July 1, 1940.

Taxing the use of machinery, as is proposed in the bill introduced in congress by Senator Joseph C. O'Mahoney (D., Wyo.), would increase the number of idle. "One of the principal reasons for the present army of unemployed is the huge tax load which our various governments have placed on employers and employees, particularly the pay roll taxes which actually place a premium on unemployment, increasing the taxes of the employer every time he hires a new employee."

The House rules com'ite has given right of way to a bill extending crop insurance to cotton. Arguing that the benefits should be expanded to corn growers Rep. L. E. Allen of Illinois said: "Secretary Wallace stands convicted of neglect and utter disregard of the well being of the corn farmers in Illinois, Iowa, and other states," Allen declared. "I cannot conceive of any law that will protect the cotton farmers against a poor crop and which fails to provide the corn farmer with same benefits." Why not put all law makers on relief?

### Charles Quinn Passes On

Charles Quinn, who devoted 25 of his 69 years to the Grain & Feed Dealers National Ass'n, of which he was sec'y from 1911 to 1936, passed away at the home of his daughter in Toledo, O., Mar. 25, following several months' illness.

Born in Guelph, Ont., Mr. Quinn moved to Toledo in 1895 and entered the newspaper profession via the proofreader route. Later he became an editorial worker, spending 17 years as reporter, dramatic critic and feature writer.

As financial editor on the *Toledo Blade*, Mr. Quinn became acquainted with John F. Courcier, then sec'y of the Grain & Feed Dealers National Ass'n, and later succeeded him in that office.



Charles Quinn, Toledo, O., Deceased.

### Coming Conventions

Trade conventions are always worth while, as they afford live, progressive grain dealers a chance to meet other merchants from the same occupation. You can not afford to pass up these opportunities to cultivate friendly relations and profit by the experience and study of others.

Apr. 18, 19, 20. California Hay, Grain & Feed Dealers Ass'n, Los Angeles, Cal.

Apr. 27. Western Seedsmen's Ass'n, Hotel Fontenelle, Omaha, Neb.

May 6, 7. Illinois Grain Dealers Ass'n, The Pere Marquette Hotel, Peoria, Ill.

May 10, 11. Texas Grain & Feed Dealers Assn., Fort Worth, Tex.

May 13, 14. Panhandle Grain Dealers Ass'n, Amarillo, Tex. Headquarters, Herring Hotel.

May 15, 16. Oklahoma Grain & Feed Dealers Ass'n, Youngblood Hotel, Enid, Okla.

May 21, 22. Kansas Grain, Feed and Seed Dealers Ass'n, Salina, Kan.

May 23. Grain, Feed and Millers Ass'n of Missouri, Hoxsey and Ben Bolt Hotels, Mexico, Mo.

May 23, 24. American Feed Manufacturers Ass'n. French Lick Springs Hotel, French Lick, Ind.

May 24. Oregon Feed Dealers Ass'n, Multnomah Hotel, Portland, Ore.

May 27, 28, 29. Pacific States Seedmen's Ass'n, St. Catherine Hotel, Santa Catalina Island.

June 3, 4. Central Retail Feed Ass'n. Schroeder Hotel, Milwaukee, Wis.

June 4. Northwest Country Elvtr Ass'n, Minneapolis, Minn.

June 7. Pacific Northwest Grain Dealers Ass'n, Pendleton, Ore.

June 16, 17, 18. Ohio Grain, Mill & Feed Dealers Ass'n, Neil House, Columbus, O.

June 19, 20, 21. Southern Seedsmen's Ass'n, Jefferson Davis Hotel, Montgomery, Ala.

June 20. Pennsylvania Millers & Feed Dealers Ass'n, Harrisburg, Pa.

June 24, 25, 26, 27. American Seed Trade Ass'n, Palmer House, Chicago, Ill.

Aug. 15, 16. New York State Hay & Grain Dealers Ass'n, Syracuse, N. Y.

Sept. 26, 27, 28. Pennsylvania Millers & Feed Dealers Ass'n, Atlantic City, N. J.

Oct. 14, 15. Grain & Feed Dealers National Ass'n, 44th annual, Brown Hotel, Louisville, Ky.

### National Association Activities

S. W. Wilder, ex-president of the Grain and Feed Dealers National Ass'n, has been chosen as member of the Executive Committee to succeed Otto F. Bast, who died Feb. 7. Mr. Wilder, head of the Wilder Grain Co., of Cedar Rapids, Iowa, is also chairman of the Country Elevator Committee of the National Ass'n. In a recent conference with government officials on a uniform storage contract Mr. Wilder's committee brought together in Chicago representatives of 6,750 country grain elevators.

E. H. Sexauer, president of the Grain & Feed Dealers National Ass'n, has requested that government officials give the country elevator groups another look at the proposed country elevator storage contract which was discussed between the government and the trade in Chicago on March 15. Mr. Sexauer, in Washington, D. C., last week, told government men that so many changes were suggested in the contract that another review of its terms was desirable before the contract is in force.

In *Cargill, Inc., v. Chicago Board of Trade*, the referee, S. Abbott Maginnis, on Apr. 3, filed his findings with the Commodity Exchange Commission, recommending that the complaint be dismissed, for lack of proof of the manipulation charged.



## Letters from the Trade

[The grain dealers' forum for the discussion of grain trade problems, practices and needed reforms or improvements. Dealers having anything to say of interest to members of the grain trade are urged to send it to the Journals for publication.]

### Probably a Dust Explosion

*Grain & Feed Journals:* The fire that damaged the new feed mill built near the Farmers Elevator at Hutchinson, Minn., probably should be added to the list of dust explosions.

The fact that there was no explosion in the pneumatic hammer mill that was in operation when the fire occurred Mar. 7 can be disregarded.

The facts that one wall bulged out and the roof was blown loose and the pressure broke a door on the ground floor, point to a dust explosion. That it occurred in the ground feed bin appears likely, as that is where most of the damage was done.

Just how the dust in the bin ignited, whether by hot metal or stone from the hammer mill, must remain a mystery, as is usually the case in dust explosions.

There may have been some fire in the bin and the starting of the hammer mill blowing dust into the bin may have supplied the dust needed for the explosion.—Observer.

### Cheap Fumigants Destroy Milling Value

*Grain & Feed Journals, Consolidated:* One bad practice in connection with the treatment and handling of soft red winter wheat, that has come to my attention a number of times during the past few weeks is worthy of serious consideration by elevator operators.

Offerings of wheat from farms, as well as a few car-lot offerings have had a very distinct odor of kerosene, which was applied in order to prevent weevil propagation.

Some farmers have applied kerosene on the floors of their bins, prior to the storage of wheat, with the intention of killing weevil, which it doubtless does in a lot of cases, however, while killing the weevil, the oil also destroys the milling value of the wheat.

Certain poor fumigants on the market contain an oil base, and while the other ingredients in this cheap fumigant doubtless will evaporate, the oil does not, and the result is that when this grain arrives at grading points, inspectors are authorized to grade it "sample grade," because of commercially objectionable foreign odors. This kerosene or oil odor is so strong in some cases that it would completely cover up the odor given off by musty wheat.

If one farmer has used this treatment satisfactorily for protection for weevil, and has not been discounted for his grain, he is naturally going to talk about it considerably among his neighbors and friends and you know how these "country-side" chats gain momentum in spreading through the country, so I think that the elevator operators and managers, particularly in our soft wheat producing territories, should guard themselves against buying grain tainted with oil odors and at the same time exert whatever influence they have to dissuade the farmers from using fumigants of this type.—Lawrence Roller Mills Co., Lucian A. Garner, Grain Buyer, Lawrenceburg, Ind.

The American Corn Millers Federation will hold its annual meeting May 7 at Chicago, with headquarters at the Morrison Hotel, announced Sec'y Harry Hunter.

### In Haste

**Professor:** If you accidentally entered a grain elevator being fumigated with hydrocyanic acid gas what steps would you take?

**Clever Student:** I would take long ones.

### Glass Front Counter in Elevator Office

A. J. TORRI, live-wire manager of the Northwestern Grain & Live Stock Co., at Seatonville, Ill., is having his office remodeled.

Glass front cases are being installed along the walls, where room is available, in which will be displayed small items that the company regularly carries in stock, such as seed inoculants, poultry and livestock remedies, rat baits, paint and others.

A special feature is the new work counter Manager Torri is having installed in the customers' room. It is a high counter. From the top to within a third of its height from the floor, the front of this counter is of plate glass, with sliding doors protecting samples of merchandise on narrow shelves. Lights for illumination of the shelves are concealed in the counter.

The back part of the counter has many drawers and extra shelving where office necessities are kept in an orderly manner.

### Hiemke Elected at Milwaukee

E. H. Hiemke, first vice president of the Milwaukee Grain & Stock Exchange for the last two years, succeeded E. S. Terry to the presidency at election Apr. 1.

Mr. Hiemke became associated with L. Bartlett & Son Grain Co. as a clerk in 1901. Four years later he became a member of the exchange. Gradually he rose thru the ranks of L. Bartlett & Son Grain Co. to become vice president. He also represents Lowell Hoit & Co. on the Milwaukee exchange.

Mr. Hiemke has served the exchange in numerous capacities and offices, and brings to the position of president a wealth of experience that assures the exchange of a fair and efficient administration.

**Winnipeg, Man.**—Announcement that Canada would abolish official rates of exchange on Apr. 1 caused a flurry in the markets. On Mar. 28 the Canadian dollar went to 19% under the American dollar. Winnipeg May wheat closed at equal to 72½¢ in American currency, or 32½¢ under Chicago. Import duty on Canadian wheat continues at 42¢. U. S. officials are reported as prepared to name restrictions on imports should exchange discounts make it possible for Canadian wheat to jump the tariff barrier.

### A Venturesome Dog Saves Boys and an Elevator

When Donald Linthicum's dog, Toy, dashing playfully ahead of his master and a group of boys, was the first to enter an abandoned grain elevator on the east side of Bison, Kan., he got no more than two jumps into the building before he fell over dead.

The group of youngsters sensed that something was wrong. They returned to town to report the catastrophe. An electrician investigated and found that a lead in the wire from the power line had slipped from its insulator and touched the steel siding of the frame elevator. The entire siding had become charged with electricity. Toy had been electrocuted, but the elevator was saved from another mysterious fire.

### Canadian Exchange

Prior to the present war the three currencies fluctuated in a narrow range and the spread between the three currencies has been between five per cent each way in the past five years.

Early in September the rates for the British pound were fixed at \$4.43 to \$4.47, and for the American dollar at \$1.10 to \$1.11 in terms of Canadian dollars at Montreal. At the same time the Bank of Canada set up machinery to transact all business in foreign exchange thru its own agencies, the chartered banks of Canada.

It is estimated that the Foreign Exchange Control Board handles about \$260 millions each month while the volume of funds available in New York is confined to a few thousand dollars a day. This represents such a small amount of money volume that were American importers allowed to bid for these funds to pay for Canadian goods, it is reasonable to assume that they would soon narrow the discount up to the prevailing fixed rates.—McCabe Bros. Grain Co.

The F.S.C.C. has accepted proposals from millers to exchange 123,965 bbls. graham flour for 504,201 bus. wheat. State relief agencies will receive the flour.

### George B. Ross Passes Away

George B. Ross, Ottawa, Kan., grain and milling leader, passed away at his home Mar. 27, following a lingering illness that began with a stroke several months ago. He was 86 years old.

Born in Indiana, Mr. Ross moved to Kansas in 1887. As manager of the Farmers Elevator Co., of Alden, Kan., Mr. Ross became familiar with the country grain business.

As president of the State Board of Agriculture and chairman of the Com'te on Agriculture of the Kansas legislature, Mr. Ross made a vigorous fight for a proposed grain inspection law in Kansas in 1913. The following June 28 he was appointed chief grain inspector for the state, adding responsibility for the grain inspection service to his other duties.

In 1918, Mr. Ross, with his sons, purchased the Whitewater (Kan.) Flour Mills Co. A year later the Shane Mill at Ottawa was added to the interests of the Ross family and became known as the Ross Milling Co. The expansion continued with the purchase of the Goerz Flour Mills Co., Newton, Kan., in 1936.

The Ross family grain and milling interests are continued by G. Murray Ross, Paul Ross and Carlton B. Ross, the three sons.



George B. Ross, Ottawa, Kan., Deceased.



## Crop Reports

Reports on the acreage, condition and yield of grain and field seeds are always welcome.

Topeka, Kan., Apr. 8.—Most of Kansas received from .40 to .60 of an inch of rain over Saturday. This will help the top soil, but is not much for the subsoil which is very, very dry.—F. A. Derby, the Derby Grain Co.

Vernon, Tex., Apr. 5.—A half inch of rain fell last night from shortly north of Lawton, becoming heavier westward Altus and then south to around here, where it continued to rain most of the day, promising to be of considerable benefit.—H. C. Donovan, statistician, Thomson & McKinnon.

Minneapolis, Minn., Apr. 6.—During the past few days quite generous rains fell throughout Montana, North and South Dakota, Minnesota and on down into Iowa. Not a great deal of field work has been accomplished—partly due to the fields being too wet in some sections.—Archer-Daniels-Midland Co.

Chickasha, Okla.—Our acreage on wheat and oats are about the same as last year. We figure about 15 per cent will be planted to feed stuff as the germination was very poor. The winter oats froze out; what wheat and oats are left don't look very good as it is awful dry.—Expansion Grain Co., J. H. Snyder.

Chicago, Ill., Apr. 4.—The April first indicated production of winter wheat is 416,991,000 bush. Indicated abandonment is about 28 per cent compared with the 1927-36 average of 18.2 per cent. The condition of the winter wheat crop is estimated at 58 per cent of normal. This compares with 73 per cent last year. The indicated condition of rye is 61 per cent normal, indicating a production of about 30,000,000.—R. O. Cromwell, statistician, Lamson Bros. & Co.

Adamsville (Oxford p. o.), Kan., Mar. 30.—Wheat crop conditions here are far behind conditions this time last year. Wheat is still very small and very thin; there hasn't been much plowed up at this date. It is so dry farmers will wait longer before planting to any spring crop. Wheat is the main crop here. At present conditions I don't believe we will raise half as much wheat this year as last. On March 28 we had a very bad dust storm; fields blown very bad in spots.—H. W. McDaniel.

Minneapolis, Minn., Mar. 26.—Conditions in many sections of the Southwest winter wheat states are deplorable and the outlook for the crop very unfavorable. Most of the seed was sown last fall in dry ground. Some fields started growth but died from lack of moisture. Others remained ungerminated until this year when some came up in January, some in February and later areas in March. Such unnatural development is not conducive to producing a crop of wheat. Much of it will be used only for pasturage.—Cargill Crop Bulletin.

Minneapolis, Minn., Mar. 30.—Due to the recent unseasonably cold weather and with ice and snow still covering much of the territory, farmers have been unable to get their ground into shape, and those who are usually anxious to get their flax sown late in March or early in April in order to have it mature before the ordinarily hot and dry weather of late July will be unable to do so. Last year at this time considerable field work had already been done in the southern districts; up to the present time we have heard of no flax planted in this territory.—Archer-Daniels-Midland Co.

Kansas City, Mo., Mar. 28.—Replacing of the subsoil reserve has not been accomplished. Top soil moisture is now sufficient for two or three weeks of growing weather without high winds except probably in the Southwest section, which could use moisture now. Abandonment will be heavy in the large acreage sections. Therefore, unless better than average moisture is received and is evenly distributed, and unless other weather factors are most favorable, production in Kansas will be small and confined largely to the eastern half of the state, with "most favorable" conditions, production might vary considerably from our present estimate of a 76,205,000 crop for Kansas.—H. L. Robinson, K. B. Latto, Robinson Elevator Co.

Atwood, Kan., Mar. 25.—Our 1940 wheat crop looks like almost a complete failure. Very little of our fall sown wheat has come up as yet. We don't think there was over 5 per cent of it germinated last fall. Our spring so far has been very backward, with most of our days cold and damp. Today we have a high wind from the south that is sure hard on what little wheat is up. A large acreage of oats and barley are being sown here this spring and corn acreage will be increased 50 per cent over last year.—Atwood Equity Exchange, J. A. Bowles, mgr.

Decatur, Ill., Apr. 6.—Winter wheat is responding nicely to showers, sunshine and growing temperatures. Precipitation this week .32 of an inch, temperature range 36 to 81 degrees. Condition for the state is 77. The plant has a good color, brown spots for the most part having disappeared. Stands are fair to good, and from present indications abandonment will be very small. However, as there is a deficiency in subsoil moisture, ample rainfall will be necessary to maintain the present indications.—Baldwin Elvtr. Co.

Chicago, Ill., Apr. 4.—The change in winter wheat prospects since Dec. 1 is unimportant. Present condition is lowest for April ever reported and suggests greater than average abandonment. Generally the growth of wheat this year is late in areas of important production due to dry weather at seeding time in the Ohio valley and to a still more marked extent in the plains area of the southwest. In addition, March closes with some fields under snow at points in the northern part of the winter wheat belt. Crop possibilities this year are unusually dependent upon weather experienced from now to June 15.—B. W. Snow, statistician.

Madison, Wis., Apr. 2.—This year Wisconsin will have the largest acreage of soybeans in the state's history if present planting intentions are carried out. Reports of planting intentions of Wisconsin farmers indicate that the state will have 336,000 acres of soybeans grown alone this year which is 35 per cent more acres than planted last year. Last year estimates showed 249,000 acres planted in the state. Wisconsin's soybean acreage has been greatly increased in the past decade. The crop is grown for the most part for forage, although last year the quantity of beans threshed was much greater than in any other year.—Wisconsin Crop Reporting Service.

Chicago, Ill., Apr. 4.—Conditions of winter wheat on Apr. 1 promise a crop of 410,000,000 bus., with abandonment of acres somewhat less than has been generally expected. Conditions in the Southwest where most of the abandonment is expected are very low, as for instance, Kansas promises only 73,000,000 bus., compares with my December 1st estimate of 70,000,000 bus., or about 100,000,000 bus. less than that state could have raised on its seeded acres if conditions all along had been ordinary to somewhat better, but, on the other hand, good improvement since December 1st took place in the Pacific Northwest.—H. C. Donovan, statistician, Thomson & McKinnon.

Amarillo, Tex., Apr. 4.—Of 4½ million acres of wheat examined in Oklahoma, the Texas panhandle and eastern New Mexico, 300,000 acres have fair root structure and healthy, well developed plants. One-half million acres have fair to good surface conditions but little subsoil moisture is left. In many places the plants are now being punished severely from lack of moisture. Large spots are very thin and some are starting to fire. One million acres are very spotted and in discouraging condition; badly blown. About 2,600,000 acres are late germination and show severe wind erosion. There is no moisture and yield possibility has been reduced to nil—A. W. Erickson.

Chicago, Ill., Apr. 4.—The April 1 condition of winter wheat is 64 per cent of normal, suggesting a crop of 437 million bushels. A year ago our April 1 prospect was 548 million, and the final outturn was 563 million bushels. Altho our present total of 437 million does not vary materially from a month ago, there has been a decline in the southwest hard wheat section (where most attention has been focused) to 165 million prospect from 189 million prospect a month ago; but in the soft wheat area (mostly east of the Mississippi river) the prospect has increased to 175 million from 152 million a month ago; there has also been some increase in the Pacific northwest. The expected abandonment of winter wheat area totals 11,258,000 acres, or 25 per cent of the planted area. Our interpretation of April 1 rye condition reports is suggestive of a crop of 29,385,000 bushels, which compares with a crop of 39,249,000 last year.—Nat C. Murray, statistician, Jackson & Curtis.

## Open Interest in Future Deliveries

As reported by the C.E.A. for wheat, corn, oats and rye, and by the Board of Trade Clearing House for soybeans the open interest in all futures on the Chicago Board of Trade recently has been as follows, in 1,000 bus.:

		Wheat	Corn	Oats	Rye	Soy-beans
Dec.	2	79,518	43,613	16,716	6,711	6,477
Dec.	9	77,276	43,449	16,138	7,266	6,840
Dec.	16	79,553	45,691	16,065	8,565	6,941
Dec.	23	83,538	48,280	15,628	9,534	6,957
Dec.	30	84,062	48,243	15,507	10,625	6,948
Jan.	6	86,017	49,517	15,329	11,532	7,011
Jan.	13	84,355	47,650	15,324	11,256	7,140
Jan.	20	84,136	46,876	15,096	11,842	7,230
Jan.	27	84,570	45,188	14,623	11,738	7,203
Feb.	3	79,457	43,857	14,161	12,475	6,746
Feb.	10	79,262	44,067	16,444	12,919	6,768
Feb.	17	81,351	44,400	14,427	13,021	6,701
Feb.	24	86,092	44,644	14,181	13,955	6,412
Mar.	2	90,782	44,234	13,888	13,847	6,397
Mar.	9	91,405	43,501	13,627	14,066	6,630
Mar.	16	91,195	42,464	13,561	14,224	6,497
Mar.	23	91,874	42,136	13,681	14,522	6,425
Mar.	30	95,090	41,538	15,560	14,861	6,326
Apr.	6	98,360	40,703	13,316	15,388	6,433

### Daily Closing Prices

The daily closing prices for wheat, corn, oats, rye, barley and soybeans for May delivery at the following markets for the past two weeks have been as follows:

Wheat													
	Option	Low	Mar.	Mar.	Mar.	Mar.	Apr.	Apr.	Apr.	Apr.	Apr.	Apr.	Apr.
	High		27	28	29	30	1	2	3	4	5	6	8
Chicago .....	109	63½	105	104¾	104½	104½	104¾	104¾	104¾	105¾	106	104½	104½
Winnipeg* .....	92½	54¾	89¾	89¼	88¾	88¾	89¼	88¾	88¾	89¼	89	88¾	88¾
Minneapolis .....	107	67	99¾	99¾	99¼	99¾	100%	100	100½	100½	101½	99½	99½
Kansas City .....	104½	58¾	99¾	99¾	99	99¼	100	99½	99½	100½	101¼	99	99
Duluth, durum .....	99¾	61½	88¼	88½	88¾	88½	89¾	88¾	89	89¾	90¾	88¼	88¾
Milwaukee .....	109	64½	105½	104¾	104½	104½	105	104½	104¾	105½	106¾	104¼	104¼
Corn													
Chicago .....	63½	42	56¾	56¾	56½	56½	56½	56¾	56½	56¾	57¾	57	57½
Kansas City .....	58¾	42¾	55¾	56¼	55¾	55¾	56½	56	56½	56½	56¾	56¾	57½
Milwaukee .....	63½	44½	56¾	56¾	56¾	56¾	56¾	56¾	56¾	57	57¾	57	57½
Oats													
Chicago .....	43	27½	41¾	41¾	41	40¾	40¾	40¾	40¼	40¾	41¼	40½	41
Winnipeg* .....	45¾	27½	39½	39½	38¾	38¾	38¾	38½	38½	38½	38¾	38¾	38¼
Minneapolis .....	38¼	27	37½	37¾	37½	37¼	37¼	36¾	36¾	37¾	37¾	37¼	37¼
Milwaukee .....	42¾	28½	41¾	41¾	41	40¾	40¾	40¾	40¼	40¾	41¼	40¾	41
Rye													
Chicago .....	77¾	43¾	67	66¾	65½	65¾	66½	65¾	65½	65¾	66½	65½	68
Minneapolis .....	71¾	41¾	62¾	62¾	61¾	62	62¾	61¾	61½	61¾	62¾	61¾	64¾
Winnipeg* .....	82	40	72¾	72	71¾	71¾	72¾	71¾	70¾	70¾	71¾	69¾	72¾
Duluth .....	74¾	62½	65	64¾	63¾	63¾	64½	63¾	63¾	63¾	64¾	63¾	66
Barley													
Minneapolis .....	48	37½	42¾	42½	42	42¼	42¼	42	42	42¾	43¾	43¾	43¾
Winnipeg* .....	55¾	33¾	53¾	53¾	52¾	52¾	53	52¾	52½	52¾	52¾	52	52
Soybeans													
Chicago .....	131½	67	110½	110½	110½	110½	110¾	110¾	109	108½	108¾	107½	107
*Canada Exchange ....	....	....	810	817	820	816	817	820	821	821	838	842	838



# Grain Movement

Reports on the movement of grain from farm to country elevator and movement from interior points are always welcome.

Chicago, Ill., Apr. 4.—Stocks of corn for grain on farms April first are estimated at 1,310,000,000 bus., of which about 900,000,000 bus. are free corn (135 million bus. old and 275 new under loans on farms) compared with 1,218,000,000 on farms April 1, 1939, of which about 970,000,000 bus. were free. Disappearance of corn from farms for the last quarter on basis of these reserves was about 620,000,000 bus. or slightly above the 602,000,000 for the same quarter a year ago.—R. O. Cromwell, statistician, Lamson Bros. & Co.

Decatur, Ill., Apr. 6.—The grain movement, which consists principally of corn, while not heavy seems to supply the demand. Terminal elevators are quoting their stocks of winter shelled corn under prices at which fresh shelled corn is moving. Estimated stocks of corn on farms show supplies are heavy. Disappearance for the first six months of the crop year has only been 53.8 per cent of the total supply available October 1, compared with the ten-year average disappearance of 64 per cent.—Baldwin Elvtr. Co.

Ottawa, Ont., Apr. 4.—Canadian wheat in store for the week ending March 29, 1940, decreased 2,487,136 bus. as compared with the preceding week and increased 169,827,279 bus. when compared with the corresponding week in 1939. The amount in store was reported as 310,720,872 bus. compared with 313,208,008 bus. for the previous week and 140,893,593 bus. for the week of March 31, 1939. The stocks of 310,720,872 bus. include 11,543,209 bus. of durum wheat. Marketings in the three Prairie Provinces for the thirty-five weeks from Aug. 1, 1939, to March 29, 1940, as compared with the same period in 1939 were as follows, figures within brackets being those for 1939: Manitoba 51,071,072 (41,405,923); Saskatchewan 211,426,163 (106,516,917); Alberta 117,974,219 (119,374,557) bus. For the thirty-five weeks ending March 29, 1940, and the same period in 1939, 380,471,454 and 267,297,397

bus. were received from the farms.—R. H. Coats, Dominion Statistician.

Duluth, Minn.—At the close of business Apr. 5, accumulation of grain in local elevators totaled 35,141,000 bus., a large part of which is already under contract to be moved out by boat to eastern ports at the opening of navigation. Bulk of stocks comprise wheat. Year ago stocks were 25,781,000 bus. Selling of loan wheat has slowed up considerably from last month's business but will continue on a moderate scale during the remainder of April when redemption period expires. Boat chartering continues slow with the present rate to unload wheat at Buffalo quoted 3¼c. Loading out and cleaning up of Canadian screenings brought in by boat last fall continues steadily. Cars are being loaded daily consigned to feed distributors

## Soybean Movement in March

Receipts and shipments of soybeans at the various markets during March, compared with March, 1939, in bushels, were:

	Receipts		Shipments	
	1940	1939	1940	1939
Baltimore	1,697	10,140	.....	.....
Chicago	487,000	753,000	259,000	528,000
Indianapolis	70,500	40,600	70,500	51,800
Minneapolis	2,600	.....	25,200	.....
Omaha	.....	6,000	.....	.....
Peoria	54,777	16,000	65,727	.....
St. Joseph	4,500	4,500	1,500	.....
St. Louis	4,800	52,200	.....	11,200
Toledo	66,000	133,500	44,700	14,610

## Barley Movement in March

Receipts and shipments of barley at the various markets during March, compared with March, 1939, in bushels, were:

	Receipts		Shipments	
	1940	1939	1940	1939
Baltimore	4,352	3,704	.....	.....
Chicago	1,004,000	1,135,000	249,000	294,000
Duluth	228,295	313,328	264,226	423,864
Ft. William	804,072	576,102	247,025	109,585
Ft. Worth	.....	1,600	.....	.....
Indianapolis	.....	1,500	1,500	1,500
Kansas City	20,800	28,800	1,600	24,000
Milwaukee	1,358,140	1,618,520	633,150	921,250
Minneapolis	2,363,000	3,097,400	2,373,200	2,204,900
Omaha	11,200	68,800	13,833	102,400
Peoria	264,600	181,000	151,900	118,800
St. Joseph	.....	5,250	.....	.....
St. Louis	172,000	187,200	70,400	33,600
Superior	138,865	203,594	248,257	336,160
Toledo	11,200	5,600	18,900	.....

in the northwestern area. Ice in the harbor is being honeycombed and top covered with slush, but is still reported about 18 inches thick, though channels are commencing to open up. Ice in the lake extends out about 20 miles with the top slush and averages about 12 inches thick.—F. G. C.

## Wheat Movement in March

Receipts and shipments of wheat at the various markets during March, compared with March, 1939, in bushels, were:

	Receipts		Shipments	
	1940	1939	1940	1939
Baltimore	2,003,066	72,978	3,954,175	97,170
Boston	983,988	140,367	1,627,908	.....
Chicago	685,000	735,000	1,415,000	1,255,000
Duluth	4,571,457	838,897	73,219	56,699
Ft. William	2,924,629	1,748,667	60,500	87,113
Ft. Worth	224,000	705,600	652,400	749,000
Houston	.....	.....	1,040,280	412,000
Hutchinson	869,400	1,092,000	.....	.....
Indianapolis	223,000	157,000	268,000	68,000
Kansas City	3,504,000	3,916,800	1,569,695	3,915,630
Milwaukee	1,570	7,700	23,800	74,200
Minneapolis	10,059,000	4,467,000	2,041,500	2,037,000
New Orleans	61,908	55,570	268,071	226,033
Omaha	820,482	1,056,000	718,200	954,800
Peoria	33,600	74,400	39,600	136,600
St. Joseph	264,000	595,200	492,800	558,400
St. Louis	540,000	794,000	1,110,000	1,007,000
Superior	2,037,570	360,357	38,857	7,851
Toledo	756,000	459,000	345,550	278,500
Wichita	1,071,000	1,012,500	777,000	1,080,000

## Corn Movement in March

Receipts and shipments of corn at the various markets during March, compared with March, 1939, in bushels, were:

	Receipts		Shipments	
	1940	1939	1940	1939
Baltimore	549,360	395,135	1,123,487	741,362
Boston	.....	600	.....	.....
Chicago	4,814,000	4,181,000	1,046,000	2,255,000
Duluth	299,285	985,778	.....	7,919
Ft. William	3,293	.....	13,357	3,071
Ft. Worth	55,500	75,000	82,500	19,500
Indianapolis	1,129,500	2,170,000	1,024,500	1,422,000
Kansas City	766,500	522,000	544,500	523,500
Milwaukee	330,150	555,900	195,000	65,000
Minneapolis	544,500	990,000	567,000	1,123,500
New Orleans	713,636	941,528	361,714	2,223,894
Omaha	609,989	445,200	961,491	806,400
Peoria	1,580,700	1,745,100	629,800	893,000
St. Joseph	361,500	190,500	271,500	123,000
St. Louis	1,020,000	529,000	599,000	1,220,840
Superior	208,663	721,952	.....	7,857
Toledo	515,200	260,400	408,905	313,165
Wichita	.....	2,600	.....	.....

## Oats Movement in March

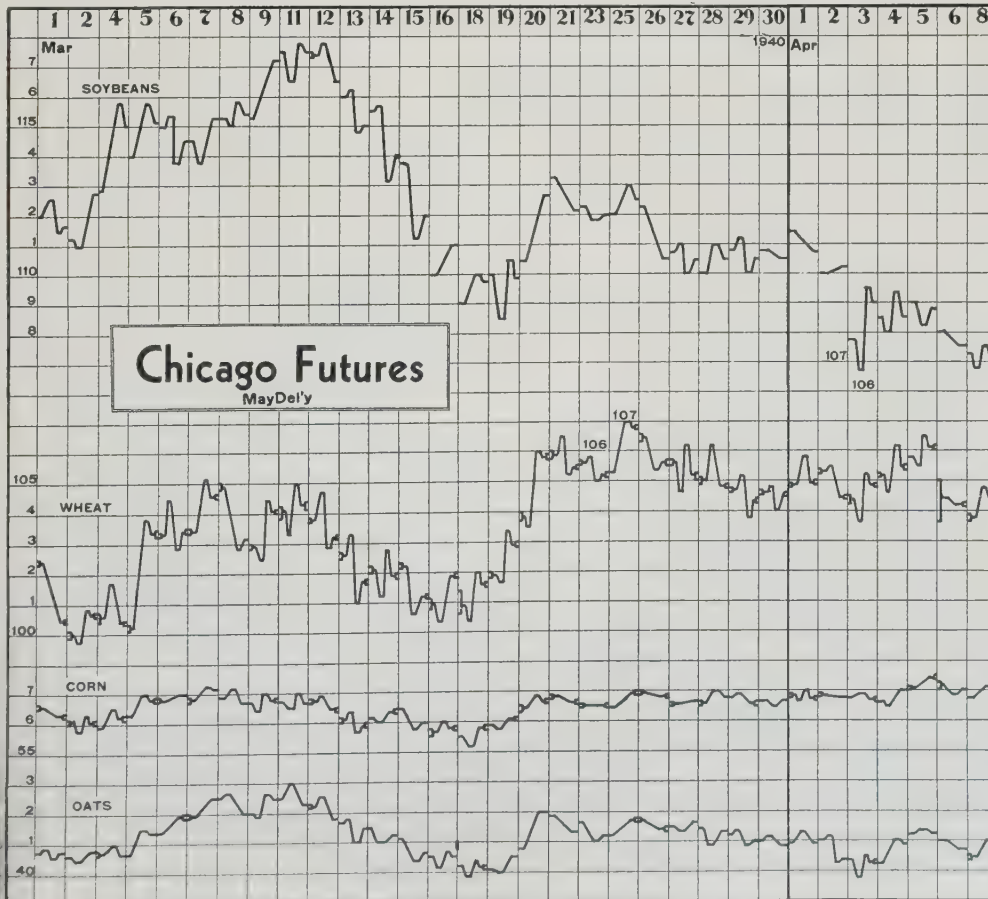
Receipts and shipments of oats at the various markets during March, compared with March, 1939, in bushels, were:

	Receipts		Shipments	
	1940	1939	1940	1939
Baltimore	55,111	83,433	.....	.....
Boston	11,900	20,400	.....	.....
Chicago	1,082,000	2,199,000	1,453,000	2,436,000
Duluth	239,484	183,770	36,843	4,913
Ft. William	1,510,185	1,030,862	1,031,313	628,950
Ft. Worth	124,000	46,000	134,000	24,000
Indianapolis	422,000	756,000	534,000	1,106,000
Kansas City	102,000	22,800	36,000	252,000
Milwaukee	36,160	27,120	104,500	72,200
Minneapolis	1,480,500	86,500	1,464,750	1,602,000
New Orleans	95,987	.....	34,764	19,015
Omaha	276,000	338,000	226,337	400,640
Peoria	298,000	362,250	228,800	202,750
St. Joseph	164,000	316,000	52,000	252,000
St. Louis	568,000	316,000	434,500	287,450
Superior	30,934	38,570	55,100	5,000
Toledo	1,223,420	934,670	1,067,060	859,225
Wichita	4,500	.....	1,500	.....

## Rye Movement in March

Receipts and shipments of rye at the various markets during March, compared with March, 1939, in bushels, were:

	Receipts		Shipments	
	1940	1939	1940	1939
Baltimore	307,461	87,135	.....	.....
Boston	1,100	1,100	.....	.....
Chicago	49,000	152,000	181,000	184,000
Duluth	498,387	441,209	10,100	33,693
Ft. William	93,648	25,032	14,479	10,030
Indianapolis	24,000	55,000	55,500	48,000
Kansas City	28,500	22,500	1,500	1,500
Milwaukee	43,790	28,300	67,770	23,845
Minneapolis	835,500	685,500	342,000	435,000
Omaha	89,763	44,800	38,330	46,200
Peoria	31,200	33,900	.....	40,300
St. Joseph	1,500	3,000	1,500	.....
St. Louis	19,500	16,500	34,500	36,200
Superior	404,801	322,098	15,000	18,500
Toledo	14,000	21,000	4,100	9,700
Wichita	.....	1,300	.....	.....





# Elevator Managers Win Special Awards for Care of Property

Through the hearty cooperation of the agents in charge of the line elevators of western Canada the number of elevator fires and accidents is being reduced each year and the elevator surroundings are being made more attractive. This is the direct result of yearly contests conducted by the Grain Insurance & Guarantee Co., through its Affiliated Inspection Bureau. During each of the last six years it has stimulated the interest of the agents in giving greater care to the property and business entrusted to them.

The 1939 Contest was a huge success. A greater number of Agents participated in the Contest than in any previous year. Over 3,100 Agents took part in it. A greater number of Agents had clear records during 1939 than in any previous year of the Contest. Approximately 75% of the Agents qualified for Certificates. Fire Losses, both in number and value, were again decreased. Over the 12 month period there were but three total fire losses suffered. The amount involved in these was \$60,800.00, and the fire loss ratio was reduced to 15.36%.

Last year the managers in charge of country elevators in the prairie provinces of western Canada proved that they fully recognized the great advantage of keeping their plants in perfect operating condition so as to render dependable service to customers at all times. Their correction of known fire hazards and conscientious care of their mechanical equipment effected a wonderful reduction in fire losses and prevented expensive business interruptions. Most of these elevators are protected by standard lightning rod equipment, and moving machinery is being safeguarded to prevent accidents.

These contests which have been conducted during the last six years are credited with effecting a most gratifying reduction in the number of elevator fires and in the ratio of fire losses, which had not been below 60% previous to the inauguration of the annual contests. Last year only three total losses occurred and the fire loss ratio was reduced to 15.36%. In 1938 the loss ratio was 36.54%; 1937—21.22%; 1936—21.65%; 1935—16.76% and 1934—41.11%.

Inspections of country elevator property are made by inspectors in the employ of the Affiliated Inspection Bureau, Limited. The inspectors' reports on the property are forwarded by the Bureau to the Traveling Superintendents who are employed by the Elevator Owners. These Traveling Superintendents must see to it that all recommendations are complied with. As the superintendents are rated in accordance with the record compiled by their agents, they are as keen as the agents to keep to the minimum, the demerits assessed for agents' failure to follow the rating requirements.

On each and every visit of inspection, the Bureau's Inspector completes a formal report on the conditions prevailing in and around the elevator which the agent must sign, certifying to the accuracy of the report.

All agents, whether prize winners or not, who have a clear record for the year, receive

a certificate. When they have completed five consecutive years without demerits, they are awarded a Master Merit Certificate, suitably inscribed and framed.

The unsightly surroundings of most country elevators consisting of discarded equipment, dirt, weeds and rubbish has not only reflected a deplorable lack of interest in the business, but has offended the artistic eyes of the visitor and increased the fire hazards of each plant.

P. J. COLLISON, Asst. Manager of the Bureau writes:

On our inspection list for the year 1939, there were 3,371 elevators. Out of this number there were only three total losses. Several factors must be considered as contributing to this record. To single out any one factor, or phase of our work, would not present a true picture of our endeavor. The factors must be considered as a whole. In order of importance, they might be listed as:

1. Frequent, thorough inspections.
2. Elimination of known hazards, through our system of awarding Credits, or of assessing Demerits.
3. The encouragement of co-operative effort on the part of the Agents, through our Cash Prize Contest.
4. Publicizing the work of the Agents by means of Articles published in Trade papers.
5. Standardization of fire extinguisher equipment and the placement thereof in every elevator inspected by us.
6. The selection of the type of extinguisher, the testing and servicing of the equipment by the Bureau and the Inspection Staff.
7. The maintenance of harmonious relations between the Employer, Employee and the Bureau, through frequent, personal contact.

The requirements of our Prize Contest are simple: To qualify for one of the Prizes, an Agent must have a clear record for the current, calendar year. In order to do this, his property must have been maintained free of any of the hazards enumerated in our Merit Rating Booklet. Then, too, he must have improved the appearance of the property by landscaping, adding flower boxes to window ledges, curtaining the windows, fencing the yard, etc. The Agents who make the greatest improvement in the appearance of the property during the current year's contest, are then awarded the cash prizes. To all other Agents who have clear records for the year, a Certificate is given. These Certificates are graded according to the number of Credits earned by the Agents. Credits are given on each clear report, and additional Credits are awarded for improvement in the appearance of the property.

Naturally, the Agent, or Manager of the Country elevator, is the spearhead of our attempt to lessen, or prevent fire losses. We are extremely proud of our success in obtaining their loyalty and co-operation. The example being set by these men is having a marked effect in their local communities. Other members in the community have become interested in Fire Prevention and are turning more and more to the Elevator Agents for leadership. Many of the Agents have been prevailed upon to assume charge of the local Fire Brigade; thus the effort set in motion to reduce fire losses in elevators, is rapidly becoming a Community enterprise.

The majority of fire losses are preventable. What we have accomplished in this respect can be duplicated elsewhere. All it requires is concerted action on the part of the owners and the wholehearted co-operation of the Agent or Manager. This should not impose any difficulty whatsoever.

The enthusiasm with which station managers enter into these contests, as well as the number of prizes and certificates awarded, give gratifying proof of their sincere interest in caring for the property and the promotion of the business. The long list of managers who won prizes and certificates during the calendar year of 1939 follows:

## Cash Prize Awards

Agent, Address and Employer	Amount
N. R. Berg, Frontier, Sask.....	\$25.00
Western Grain Co., Ltd.	
G. J. Frasz, Odessa, Sask.....	25.00
Reliance Grain Co., Ltd.	
R. J. Jarvis, Blackie, Alta.....	25.00
Searle Grain Co., Ltd.	
H. J. Lien, Burr, Sask.....	25.00
Federal Grain, Limited	
J. H. Theriault, Provost, Alta.....	25.00
National Elevator Co., Ltd.	
L. S. Todd, Fedorah, Alta.....	25.00
Northern Grain Co., Ltd.	
F. R. Wade, Rosetown, Sask.....	25.00
Searle Grain Co., Ltd.	
N. W. Bickett, Manola, Alta.....	12.50
Searle Grain Co., Ltd.	
L. H. Boucher, LaSalle, Man.....	12.50
N. M. Paterson & Co., Ltd.	
G. M. Cowles, Holbein, Sask.....	12.50
Searle Grain Co., Ltd.	
Andrew Gray, Lipton, Sask.....	12.50
Reliance Grain Co., Ltd.	
Thomas Moss, Swallow, Alta.....	12.50
Alberta Pacific Grain Co.	
R. H. Schulz, Carbon, Alta.....	12.50
Midland & Pacific Grain Corp.	
O. R. Stewart, Plunkett, Sask.....	12.50
Reliance Grain Co., Ltd.	
H. B. Woodrow, LaPorte, Sask.....	12.50
Pioneer Grain Co., Ltd.	
J. N. Baldwin, Fertile, Sask.....	10.00
Canadian Cons. Grain Co., Ltd.	
Peter Chaba, Egremont, Alta.....	10.00
Northern Grain Co., Ltd.	
R. H. Douglas, Bluffton, Alta.....	10.00
Alberta Pacific Grain Co.	
J. W. Easton, Roundhill, Alta.....	10.00
Searle Grain Co., Ltd.	
J. P. Horbay, Redberry, Sask.....	10.00
Reliance Grain Co., Ltd.	
G. M. McKay, Abernathy, Sask.....	10.00
Federal Grain Limited	
J. C. Redmond, Beechy, Sask.....	10.00
Reliance Grain Co., Ltd.	
H. A. Tooke, Yellow Creek, Sask.....	10.00
Searle Grain Co., Ltd.	
G. S. Warren, Bassano, Alta.....	10.00
Alberta Pacific Grain Co.	
Anton Anderson, Indian Head, Sask.....	7.50
N. M. Paterson & Co., Ltd.	
G. H. Dishaw, Milo, Alta.....	7.50
Pioneer Grain Co., Ltd.	
Fred Harding, Abee, Alta.....	7.50
Searle Grain Co., Ltd.	
R. R. Livesley, Mountinside, Man.....	7.50
N. M. Paterson & Co., Ltd.	
J. A. Longmuir, Roseray, Sask.....	7.50
Pioneer Grain Co., Ltd.	
S. J. Rice, Kuroki, Sask.....	7.50
Alberta Pacific Grain Co., Ltd.	
Douglas Shore, Brada, Sask.....	7.50
Searle Grain Co., Ltd.	
D. L. Cameron, Woodnorth, Man.....	5.00
British America Elev. Co., Ltd.	
Howard Colwell, Compeer, Alta.....	5.00
Searle Grain Co., Ltd.	
P. D. Draper, Pontrilas, Sask.....	5.00
Canada West Grain Co., Ltd.	
W. S. Geddie, Ruddell, Sask.....	5.00
Canadian Cons. Grain Co., Ltd.	
Trigge Olafson, Tantallon, Sask.....	5.00
Reliance Grain Co., Ltd.	
J. V. Poole, Parkbeg, Sask.....	5.00
N. M. Paterson & Co., Ltd.	
H. S. Smith, Rowatt, Sask.....	5.00
N. M. Paterson & Co., Ltd.	



Searle Grain Co., Holbein, Sask., Glen M. Cowles; N. M. Paterson & Co., Ltd., Rowath, Sask., Howard S. Smith; N. M. Paterson & Co., Ltd., Mountinside, Man., Russell R. Livesley.

[See facing page and outside front cover.]



L. L. Sutor, Blackie, Alta.	5.00
Independent Grain Co., Ltd.	
H. J. Dyck, Osler, Sask.	20.00
Pioneer Grain Co., Ltd.	
J. S. Friesen, Hague, Sask.	20.00
McCabe Bros. Grain Co., Ltd.	
William Potts, Totnes, Sask.	20.00
Pioneer Grain Co., Ltd.	
E. G. Young, Rocky Mt. House, Alta.	7.50
Midland & Pacific Grain Corp., Ltd.	

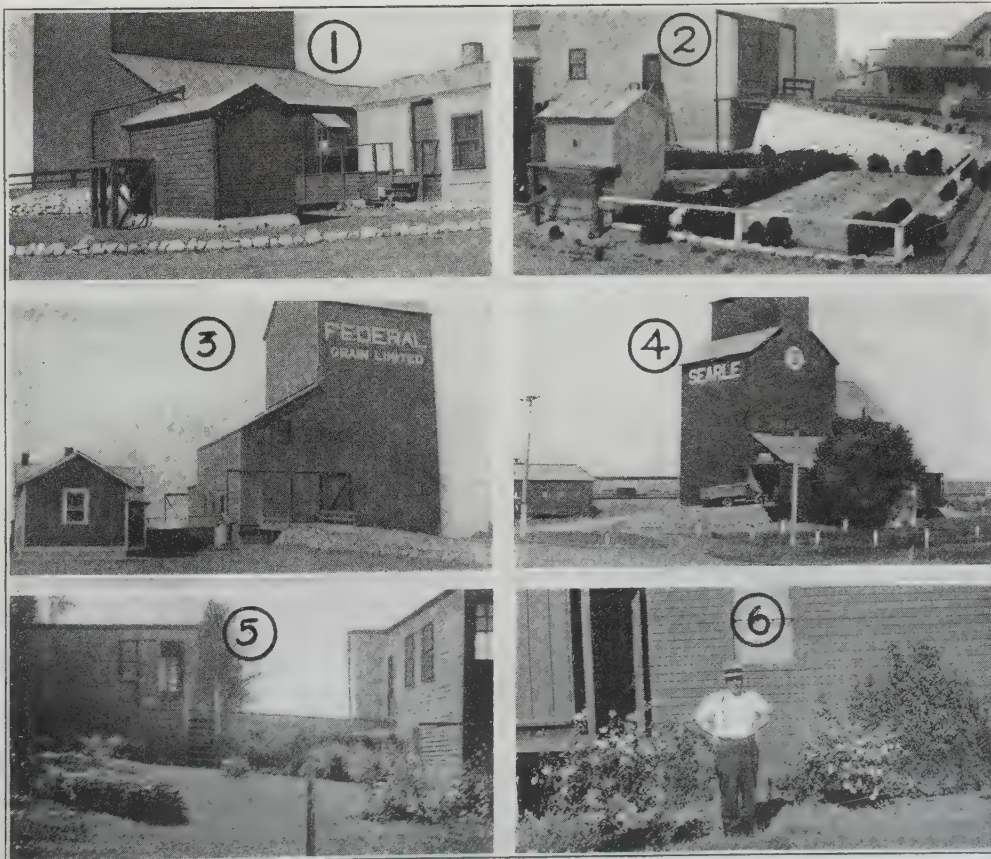
## Master Certificate Awards

Name and Employer	Address
W. F. Bozarth	Champion, Alta.
Alberta Pacific Grain Co., Ltd.	
Merl N. Jones	Crossfield, Alta.
Alberta Pacific Grain Co., Ltd.	
Byron F. W. Kiernan	Streamstown, Alta.
Alberta Pacific Grain Co., Ltd.	
G. N. McIntosh	Countess, Alta.
Alberta Pacific Grain Co., Ltd.	
W. G. McIntyre	St. Albert, Alta.
Alberta Pacific Grain Co., Ltd.	
G. E. Reid	Cudworth, Sask.
Alberta Pacific Grain Co., Ltd.	
G. M. Rositch	Moseley, Sask.
Alberta Pacific Grain Co., Ltd.	
C. R. Spence	Magrath, Alta.
Alberta Pacific Grain Co., Ltd.	
Charles H. Wells	Granum, Alta.
Alberta Pacific Grain Co., Ltd.	
J. C. Letcher	Innisfail, Alta.
N. Bawlf Grain Co., Ltd.	
J. M. Wallace	Barons, Alta.
N. Bawlf Grain Co., Ltd.	
S. W. Verbiwski	Sandy Lake, Man.
N. Bawlf Grain Co., Ltd.	
J. F. Duff	Davidson, Sask.
British America Elevator Co., Ltd.	
A. B. Graham	Birch Hills, Sask.
British America Elevator Co., Ltd.	
K. Corbett	Kirkella, Man.
The Canadian Cons. Grain Co., Ltd.	
A. Duncan	Delisle, Sask.
The Canadian Cons. Grain Co., Ltd.	
A. Larson	Beausejour, Man.
The Canadian Cons. Grain Co., Ltd.	
John W. Wade	Lac du Bonnet, Man.
The Canadian Cons. Grain Co., Ltd.	
E. Ferguson	Downe, Sask.
Federal Grain Limited	
G. W. Ferguson	Ruthilda, Sask.
Federal Grain Limited	
A. J. Hammel	Prelate, Sask.
Federal Grain Limited	

G. E. Haw	Cupar, Sask.
Federal Grain Limited	
A. A. Hiebert	Gretna, Man.
Federal Grain Limited	
R. Keown	Fairmount, Sask.
Federal Grain Limited	
P. Krezanoski	Haight, Alta.
Federal Grain Limited	
W. Laharty	Flaxcombe, Sask.
Federal Grain Limited	
G. Roberts	Sevick, Man.
Federal Grain Limited	
N. Palamarek	Smoky Lake, Alta.
Federal Grain Limited	
T. A. Little	Macleod, Alta.
Midland & Pacific Grain Corp., Ltd.	
G. Skovmand	Berwyn, Alta.
Midland & Pacific Grain Corp., Ltd.	
A. A. Thomas	Didsbury, Alta.
Midland & Pacific Grain Corp., Ltd.	
A. Peterson	Leroy, Sask.
McCabe Bros. Grain Co., Ltd.	
E. E. Arnold	Nanton, Alta.
National Elevator Co., Ltd.	
J. G. Cooper	Leask, Sask.
National Elevator Co., Ltd.	
L. Johnson	Mozart, Sask.
National Elevator Co., Ltd.	
L. H. Jones	Vulcan, Alta.
National Elevator Co., Ltd.	
P. J. Lepp	Langham, Sask.
National Elevator Co., Ltd.	
L. W. Swanson	Cayley, Alta.
National Elevator Co., Ltd.	
M. T. Dixon	Heath, Alta.
The Northern Elevator Co., Ltd.	
A. D. Griffiths	Ardrossan, Alta.
The Northern Elevator Co., Ltd.	
D. McKerrrow	Biggar, Sask.
The Northern Elevator Co., Ltd.	
A. N. Podovineckoff	Veregin, Sask.
The Northern Elevator Co., Ltd.	
R. J. Vrabetz	Birmingham, Sask.
The Northern Elevator Co., Ltd.	
K. J. Borbridge	Nier, Alta.
Messrs. Parrish & Heimbecker, Ltd.	
H. H. Arnold	Horsham, Sask.
N. M. Paterson & Co., Ltd.	
H. Bingert	Richmond, Sask.
N. M. Paterson & Co., Ltd.	
W. J. Keller	Emerson, Man.
N. M. Paterson & Co., Ltd.	
T. Anthony	Marsden, Sask.
Pioneer Grain Co., Ltd.	
B. L. Baldrige	Grainger, Alta.
Pioneer Grain Co., Ltd.	

A. F. Hartell	Elk Island, Alta.
Pioneer Grain Co., Ltd.	
E. S. Knudtson	Champion, Alta.
Pioneer Grain Co., Ltd.	
A. F. Low	Ponoka, Alta.
Pioneer Grain Co., Ltd.	
J. D. McRae	Tessier, Sask.
Pioneer Grain Co., Ltd.	
J. Menzies	Flintoft, Sask.
Pioneer Grain Co., Ltd.	
E. L. Oliphant	Hughton, Sask.
Pioneer Grain Co., Ltd.	
P. R. Taylor	Bethune, Sask.
Pioneer Grain Co., Ltd.	
C. R. Helm	Eston, Sask.
Pioneer Grain Co., Ltd.	
W. Craig	Strathclair, Man.
Reliance Grain Co., Ltd.	
F. D. Finlay	Hanley, Sask.
Reliance Grain Co., Ltd.	
H. A. Oman	Hyas, Sask.
Reliance Grain Co., Ltd.	
J. R. Rotzinger	Carmel, Sask.
Reliance Grain Co., Ltd.	
W. R. Strachan	Wiseton, Sask.
Reliance Grain Co., Ltd.	
J. R. Taylor	Meadow Lake, Sask.
Reliance Grain Co., Ltd.	
W. McGlashan	Astum, Sask.
Scottish Co-Operative Wholesale Soc.	
T. E. Pollard	Newbrook, Alta.
Searle Grain Co., Ltd.	
J. F. Chegwin	Fawcett, Alta.
Searle Grain Co., Ltd.	
W. L. Cleveland	Orkney, Sask.
Searle Grain Co., Ltd.	
A. Eamer	Stranraer, Sask.
Searle Grain Co., Ltd.	
J. R. Gage	Marwayne, Alta.
Searle Grain Co., Ltd.	
C. L. Hornin	Girvin, Sask.
Searle Grain Co., Ltd.	
L. Lagimodiere	Spiritwood, Sask.
Searle Grain Co., Ltd.	
J. G. Lemon	Mair, Sask.
Searle Grain Co., Ltd.	
F. B. Reishus	Ranfurly, Alta.
Searle Grain Co., Ltd.	
John Shand	Cutknife, Sask.
Searle Grain Co., Ltd.	
J. McMeckan	Warspite, Alta.
Home Grain Co., Ltd.	
D. Tkatch	Preeceville, Sask.
Home Grain Co., Ltd.	
H. E. Ismond	Young, Sask.
Western Grain Co., Ltd.	
E. J. Little	Laporte, Sask.
Western Grain Co., Ltd.	
H. E. Mills	Kenaston, Sask.
Western Grain Co., Ltd.	
A. G. Montgomery	Glenside, Sask.
Western Grain Co., Ltd.	
P. J. Pajot	Carlton, Sask.
Western Grain Co., Ltd.	
W. B. Wilson	Bounty, Sask.
Western Grain Co., Ltd.	

## Managers Won First Prize for Landscaping These Elevators



1. Western Grand, Frontier, Sask., N. R. Berg, agt. 2. Reliance Grain Co., Ltd., Odessa, Sask., Geo. J. Frasz, agt. 3. Federal Grain, Ltd., Burr, Sask., Halver J. Lien, agt. 4. Searle Grain Co., Ltd., Blackie, Alta., Robert J. Jarvis, agt. 5. Northern Grain Co., Ltd., Fedorah, Alta., Lewis S. Todd, agt. 6. Searle Grain Co., Ltd., Rosetown, Sask., Francis R. Wade, agt.

[See facing page and outside front cover.]

## Improved Duplicating Grain Tickets

Use of Form 19GT as a scale book saves much time and labor as one writing with the use of carbon gives a complete record and at the same time, a ticket for the hauler.

Each of the 125 original leaves bears four scale tickets, is machine perforated, printed on white bond, size of tickets 3x6 1/4 inches. The 125 duplicates are printed on manila, but not perforated. Check bound at top of tickets with hinge top cover, 500 tickets in each book arranged horizontally. Each book 7 1/2 x 12 inches. 250 leaves with 5 sheets of carbon.

Each ticket has spaces for following record: "Owner, Hauler, Grain, Grade and Dockage, Gross, Tare, Net, Total Dockage, Net Pounds, Bushels, Price and Amount, Storage Ticket No., Station Ticket No., and Date, Weigher, Name of Firm or Buyer." Order Form 19GT Duplicating. Price \$1.20 plus postage.

Triplacating is the same form as 19GT described above with 125 sheets strong white tissue for buyer, bound in between the original tickets for hauler and the duplicate for headquarters so as to make three copies with one writing. Five sheets dual faced carbon, 375 leaves, weight 3 lbs. Order 19GT Trip. Price \$1.65 plus postage.

GRAIN & FEED JOURNALS  
Consolidated

332 So. La Salle St.

Chicago, Ill.



## Concrete Tanks Covered with Your Air Compressor Hazards

By A. R. SCHRODER, Hinsdale, Ill.

The walls of the concrete elevator built in 1917 at Emmetsburg, Ia., proved to be porous and permitted rainwater to percolate thru to the grain in store.

To prevent damage to the grain by water Pirl Bourret, manager of country elevators for the Quaker Oats Co., resorted to an expedient he had found successful on an elevator at Quimby, Ia., whose tile block walls leaked badly. This was to cover the walls completely with corrugated iron.

As a support for the attachment of the iron siding vertical 2x4 scantlings and horizontal 1x6 bands of wood were fastened to the concrete with expansion bolts.

The vertical scantlings were 82 ft. high, set 2 ft. apart and required  $\frac{5}{8}$  inch expansion bolts every 26 ins. The horizontal bands of 1x6 were placed every 3 ft. and nailed.

To this framework was nailed the 26 gage,  $1\frac{1}{4}$  in. cross corrugated metal plate, lapped horizontally  $2\frac{1}{2}$  corrugations and vertically 3 ins., so water can not beat behind the edge of metal, leaving an air space between concrete and iron of  $2\frac{3}{4}$  ins.

All vertical corrugations are in true alignment. Small, headed, hot-galvanized, 10-gage nails were used to anchor the metal to the framework. Mr. Bourret persuaded the T. E. Ibberson Co. to undertake the work, and its attractive exterior attests their skill.

In the foreground of the pictures are some of "Uncle" Wallace's government steel corn tanks.

In the background is the seed corn drying house operated by the Quaker Oats Co. in connection with the elevator. The company is not in the seed corn business but for the benefit of its farmer patrons in Pocahontas and Palo Alto Counties it buys selected open-pollinated corn from a few growers and dries it.

The drier is built of clay blocks on substantial concrete foundation walls, the interior being lined with galvanized iron to prevent loss of heat by leakage of air which is heated by a regulation coal furnace. This enterprise was started 6 years ago and is devoted to white seed corn only. This is the only station in Iowa where the company processes seed corn.

Air Compressors and air tanks have been a source of considerable trouble and danger to the life of the elevator operator as well as a fire and explosion hazard. In order to study these hazards we must familiarize ourselves with some of the operating characteristics.

**TWO STAGE COMPRESSORS:** Two stage compressors are much more efficient—are subject to less wear and tear and operate at lower temperatures than single stage compressors.

Instead of compressing the air from the initial to the final pressure with one stroke of the piston, two stage compressors accomplish this result in two easy stages; air is taken into a large cylinder and compressed to an intermediate pressure. It is then passed through an inter-cooler to a small (high pressure) cylinder and then discharged to the line.

As the air passes through the inter-cooler, the heat of compression which is generated is partially removed. This cooling and the consequent reduction of volume is the essential detail of operation in two stage compressors. Therefore, it is important to select the one with the most effective inter-cooler.

The two pistons of the two-stage compressors are so proportioned that the load is balanced. The large piston pumps against a low pressure and the small piston pumps against a high pressure so that each piston does the same amount of work.

The normal pressure being 15 pounds, the first stage will boost it 75 to 80 pounds, or about five times the normal pressure. Then, after it is cooled, the second stage will compress it again five times or bring it from 75 pounds to 375.

Just as important as the savings of power, is the maintenance of low temperature which permits satisfactory lubrication at high pressure, reducing the deposit of combustible material in the air line and air receiver, and minimizes the liability of fires and explosions.

**INSTALLATION OF AIR COMPRESSORS:** Air compressors such as are used in elevators and mills may introduce serious haz-

ards to both life and property, unless precautions are taken to

1. Purchase suitable equipment
2. Install it properly in a suitable location
3. Give it proper care and maintenance

The explosion of a compressor tank may result in blazing carbon being showered about the room igniting almost instantaneously any combustible material with which it may come in contact.

It seems customary to place the compressor and tank in an out-of-the-way place, such as in the basement or under the dump hopper or oftentimes on a shelf above the driveway floor. It seems needless to point out that such procedure is a serious mistake for in such locations the compressor becomes covered with dust and is forgotten, suffering from lack of proper maintenance. Compressors and their tanks should be placed in as clean a location as can be had, such as in the power house, in the office or in a clean room off the office. When a compressor becomes covered with dust, radiation of heat from it is seriously interfered with, thus causing it to overheat.

The air intake should, whenever possible, be extended to a clean location outside of the building and screened with a screen of about 1/16 inch mesh. The use of an efficient air cleaner or filter is highly recommended.

Both the compressor and tank should be equipped with fusible relief plugs. These plugs will be supplied by the manufacturer of the equipment upon request, even though they may not be regularly furnished.

The compressor tank shall be equipped with a relief valve which shall be designed or set to open at a pressure of about ten pounds above the maximum air pressure for which the system is designed to operate. Such relief valves often become dirty or gummy, hence the necessity for frequent cleaning to insure proper operation and prevent bursting of the tank.

One of the most important considerations is to provide a blow-off valve at the bottom of the tank which shall be used to blow off the accumulated water, oil and sludge at least once each day. This is accomplished very easily by pumping the air pressure up to about 100 pounds and then opening the blow-off valve. The rush of air carries off most of the condensed water and excess oil.

The big question is what makes an air compressor installation hazardous. The chief hazard lies in the too generous application of oil to the working parts of the compressor and the use of oil of improper quality. The heat developed by compression carbonizes the oil. This carbon collects on the valve of the compressor, in the tank, and in the air lines to the tank. The deposit on the valves causes them to leak and the repeated compression of the air as it passes through the leaky valves results in an excessively high temperature. Such high temperatures are sufficient to ignite the lubricating oil and produce violent explosions. Such explosions usually result in blazing carbon and oil being showered about the room, igniting instantaneously any combustible material with which it may come in contact, say nothing of serious burns to workmen in the vicinity. For proper maintenance—

Use nothing but the proper kind of oil. (Using the wrong type of oil results in trouble.)

Do not use too much oil.

Remove and examine the valves periodically to see that carbon deposits have not caused sticking or improper leakage.

Blow off the compressor tank once a day to remove any accumulations of oil, water or sludge.

Inspect the relief valve at frequent intervals to see that it is in dependable operating condition.

Keep the outside of compressor and air lines clean by cleaning or blowing them off with an air hose at least once each week.

**SELECTION OF EQUIPMENT:** The  
[Continued to page 302.]



Porus Concrete Walls Protected by Galvanized Iron at Emmetsburg, Iowa.



# Superintendents Society Meets in Toronto

For the second time in its eleven years the Society of Grain Elevator Superintendents of North America held its annual meeting in Canada. The Royal York Hotel in Toronto was the mecca April 1, 2 and 3 of the superintendents from both sides of the border.

Throughout the three days the members of the Society, superintendents of grain elevators and allied plants, discussed grain handling problems, safety and accident prevention, winding up the three busy days with a gala affair the last night.

Sunday preceding the convention was given over to registration and committee meetings.

## Monday Morning Session

PRES. T. C. MANNING, Kansas City, called the meeting to order, and introduced A. A. Scream, treas. Toronto Elevators, Ltd., who extended a cordial greeting to Toronto. J. A. Smith, Sarnia, Ont., welcomed the U.S.A. visitors to the Dominion. Pres. Manning responded.

RAY B. BOWDEN, exec. v.p., Grain & Feed Dealers Nat'l Ass'n, in his talk on Trends in the Grain Trade, said in part: Lines on your business charts seldom follow steady curves or straight lines; they follow the hill-and-valley course normally. It is the hope of private merchants in the grain trade that the trend of the past few years can be changed, and that private initiative and enterprise can continue to hope for modest profits from efficient and ethical private business. It is their hope that America veer away from the dictatorship of even the most benign individual or bureau.

A well known American once, not so long ago, wrote that America must choose between two certain principles of action. And in this trend that threatens the end of efficient private business, America must choose once more between the two schools of social and economic thinking, one seeking a chance for individual initiative under fair rules, the other pointing squarely to socialization as the desired goal. Our Congress will determine the trend, will mark the lines upon the chart that all must follow. The decision will not be by an individual nor by a political party. It will come through the action of representative government, and will even measure in some extent whether government is to remain representative of both majorities and minorities, free, as we pray, from the choking grip of dictatorship that is within the present trend of the world today.

PRES. T. C. MANNING, Kansas City, in his annual address, reviewed the work and the aspirations of the Society.

SECY DEAN M. CLARK, Chicago, in reporting on the activities of the Society during the past year, said:

## Sec'y Clark's Report

The axiom about "being so close to the forest one can't see the trees" assuredly applies to the secretaryship of this association as far as our net gain of 67 new members goes.

To have weathered the storms through the past eleven years and come out of the tumult with as many members as we have today, gives one a feeling of the steady and conservative "pulling" power of the association's activities and accomplishments.

Not only in number is the society growing stronger, but in the caliber of its members, which, I'm proud to say is the source of extraordinary pleasure. To know that we have been joined by managers and owners in increasing numbers is a stimulant. I hope that we will fulfill their expectations.

Five chapters of this Association are now functioning formed in the order named, Chi-

cago, Minneapolis, Fort William-Port Arthur, Kansas City and Omaha.

We have again been mighty fortunate during the past year in having so many conscientious, serious-minded workers within our ranks, who give unstintedly of their time and energies for the sake of all, who spend from their own firm's reserves to attend meetings, join in conferences, and counsel throughout the continent on urgent matters that both build for the future and protect against inroads of the present. With an ever-increasingly active group of executives and committeemen, nothing can keep the Society from making every dollar the employers spend in sending their superintendents to these conventions, pay them dividends in arithmetical progression,—and that's just exactly what we aim to accomplish.

One or two owners and managers still profess that it is a bit difficult to see the tangible results brought back by their superintendents, but these same men send their superintendents right back every year. Therefore, I doubly hope every member will take home a great assortment of valuable information. This association can only offer a meeting ground similar to any grain exchange trading floor for getting together to evaluate ideas, new and old, and either agree on them or make no trade.

As to the integral workings of the secretary's office, our time is primarily taken up with routine matters, chapter activities, service to inquiring members, and whatever else your officers deem expedient to have undertaken or carried on.

I am sure that the recommendations made by your officers and committeemen this year will give everyone of you something to think about and work for during the coming year, for in an association like this each one of you is or can be the association as far as making worthwhile endeavors sustain momentum.

We are fortunate in that our undertakings are as free of costly burden as they are, although it does take quite a bit of our income to hold up those activities we have already launched for the benefit of our elevator owners and manager-employers.

I freely admit that all the things planned and hoped for have NOT been accomplished, but everything invariably unfolds itself in time, just as it should.

R. B. POW, Fort William, acting for the Committee on the Name, said in part: The name superintendent gives the impression to managers that they were possibly excluded from membership because they were on a little higher plane. It was found in some plants particularly on the American side that the foreman belonged to a labor organization. Therefore it would be better for the society, and for its future, if very definite regulations

were laid down and these regulations should be given the same publicity as the name. Therefore the committee recommended that the name be changed to the Grain Industries Superintendents Ass'n. If possible a footnote in smaller type be placed on the letterhead under the name so that any correspondence that went out from the society would be clear on the point. It would make clear the eligibility or ineligibility of certain individuals for membership. That is the recommendation of your committee.

MR. MANNING: We have some difficulty with the union in this regard. If a man acts as an assistant superintendent and goes out to the house and starts the grain or does any work you are immediately in conflict with the union. We have that condition every day in Kansas City. An assistant does not do any work in the house; a foreman does. In Canada a foreman might properly in many cases be called a superintendent. In our country, he would not. That is what we are trying to solve.

MR. POW: The committee will meet again and bring in a recommendation.

P. C. POULTON, Fort William: I think our name covers us pretty well. However, we might make clear through our publicity and printed matter just who is and who is not eligible to join our society.

G. J. SHAW, Port McNicoll: If we could iron this out it would be a very wise thing. If we don't change the name we ought to do something that would bring in the managers.

MR. MANNING: The question in my mind is whether it would give us more prestige with the operators to take foremen in or leave them out. If they don't come into the society they are going to remain in the union and the time is not far distant when the operator is going to need the prestige of the superintendent and those foremen, too, if they can get it. There has to be a dividing line between the two societies. I think the foreman belongs out of the union.

E. R. EVANS, Champaign, Ill.: We had a man who wanted to come in. We had to look in the constitution to see whether he was eligible. Apparently the question of unionism is important.

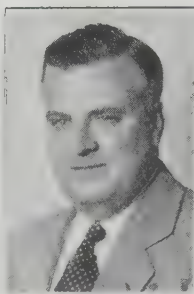
HENRY RICHARDSON, Clifton, N. J.: The superintendent is the man who really runs things. I was in an operator's office the other day when the man told me he had never been down to the elevator. Why cannot we be a society and keep the way we are?

W. A. THOMSON, JR., Louisville, Ky.: Many small operators—and I am one—are everything from office boy to president in their particular firm. Many would like to belong to the society and we should certainly see they have that right.

PRES. MANNING: I believe there is no objection to the superintendent of any processing plant, no matter how small, joining this Society. Any superintendent, if acting as superintendent, is eligible to join.

MR. POW: Personally, I am averse to making any change. We are all attached to the

## Directors and Officers of Superintendents' Society



Left to right: Pres.-Elect Percy C. Poulton, Fort William; 1st Vice-Pres.-Elect H. L. Heinrikson, Sioux City; Retiring Pres. T. C. Manning, Kansas City; Director R. B. Pow, Fort William.



old name. We can get around our difficulty in some other way. It seems to me that we who run elevators and call ourselves superintendents, managers, ass't superintendents and foremen, are all in the same position.

A motion was made and carried that the question of changing the name of the Society be referred back to the committee for further consideration.

DR. L. H. NEWMAN, Dominion Cerealists, Dept. of Agriculture, Ottawa, in his address on the Production and Testing of New Varieties of Wheat, recounted the work which has been and is being done by his department in the development of new wheat varieties.

H. L. HEINRIKSON, Sioux City, read a paper on Grain Elevators and Railroads vs. Trucks which will be published in a later number.

G. L. PARSONS, pres. Goderich Elevator & Transit Co., Ltd., Goderich, Ont., in his talk on Unloading Headaches, which is published elsewhere in this number, brings out many of the things which keep superintendents on their toes and cause them to grow old too soon.

PAUL CHRISTENSEN, Minneapolis, read the paper presented before the Minneapolis Chapter of the Society by F. Peavey Heffelfinger and published in the March 27, Grain & Feed Journals.

T. C. MACNABB, gen'l supt. C. P. Ry., St. John, gave an address on Handling Grain Through St. John, which is published elsewhere in this number.

E. R. EVANS, Champaign, Ill., in his comments on the Problems of Small Plant Operation, pointed out many things which will prove of interest and value to both large and small operators.

### Monday Dinner Session

After the inner man was satisfied, the superintendents and their ladies listened to Capt. F. J. Davis, sec'y, Canadian Navigators Federation, who talked on Great Lakes Shipping and Its Opposition to the Deep Waterway Project. Excerpts from this interesting talk are published in this number.

GEORGE LEACOCK, of the family of Canadian humorists, kept the audience in an uproar with his interesting stories.

### Tuesday Morning Sight Seeing

A trip through the plant of the Dunlop Tire & Rubber Co. gave the superintendents an opportunity to see belting made. Their great interest in the various processes made it necessary to cancel other trips scheduled for the morning.

### Tuesday Afternoon Session

Following a tasty luncheon, the afternoon session was called to order by the efficient Percy Poulton, who introduced Dr. E. W. Crampton, McGill University, whose interesting and informative talk on Comparative Value of Barley for Feeding, will appear in a later number.

T. C. JAMES, Dist. Engineer, Ontario Hydro Dev. Corp., gave an outlined description of the activities of the corporation and related what it was doing for the Province.

The round table discussion on many topics brought out the opinions of various superintendents which shows better than anything else how close these men work in the solution of their common problems.

### Grain Cleaning

MAYNARD LOSIE, Minneapolis: The cleaning problem differs from year to year according to the market situation. Everything changes. Last year it was barley; this year it is rye. We have to get machines to grade them. That is our difficulty. I don't know how it is in Canada and I think manufacturers have done a lot in the last 6 or 7 years in giving us machines and we know there have

been many improvements, but where to do it and how to do it is up to them. On some types we have difficulty in getting seeds out and getting enough suction, whereas with screen machines we don't have so much difficulty.

We have a letter here from the Omaha Chapter, dealing with set up or plugged cars; the purpose of putting two grades of a certain grain in with the inferior grain found on the bottom may have been instituted with the best of intent, but it has only encouraged the small shipper to ship musty damp grain because if his car did not get by the sampler it would not put him out anything anyway. If he did get by then the buyer was defrauded. When it was established it is then up to the elevator superintendent to move it and he is supposed to wave his magic wand and separate the grades.

Then there is trouble with the new Tag moisture tester which might not be right. The trouble with the Tag tester is that it does not work under all circumstances, when you have low and high grade samples unless you allow the samples to stand for a long period. It is the order of the Federal department to use the Tag system exclusively, and that should be changed so that you can use the Brown-Duval tester. You can't wait for the Tag system sometimes.

### Testing for Moisture

J. R. COUGHLIN, Minneapolis: I think you do not get an accurate test on the Tag at the time the car is loaded unless it stands. If you could mix it in the bin and let the grain blend for three or four days probably you would get an accurate test. You have to give the moisture a chance to get into the dry grain when you mix two different grades.

E. E. FRAUENHEIM, JR., Buffalo: You have to take sample and put in a tin can for 24 hours and all the while cars are interned. We mix an awful lot of corn and a lot of our work is mixing high and low moisture corn to get a middle grade grain. We are always pressed for time and if somebody could get a good moisture tester we would pay a good price for it. On the Tag the indicator jumps up and down like a jumping jack on mixtures that have not had a chance to blend.

MR. HEINRIKSON: I have found that you have an unevenly loaded car of acid corn with jumpy readings. That is one place the Tag comes in handy. It is close enough on trucks. You will find that acid corn will not keep. If you get a smooth reading you will find you have a uniform load and everything else is all right.

MR. COUGHLIN: We handle considerable

### Among Delegates to S. O. G. E. S. Convention



Top, l. to r.: Art Osood, Minneapolis; Russ Maas, Hammond, Ind.; Barney Weller, Chicago; W. H. Kent, Chicago; Harry Olson, Chicago, and Paul Christensen, Minneapolis, 1st vice-pres.-elect.  
2d row, l. to r.: Grover C. Meyer, E. I. Odell, T. C. Manning, W. K. Kamp and H. J. Hixson, all Kansas Citians.  
Bottom row, l. to r.: Henry Richardson, Clifton, N. J.; Clem Herdegen, Buffalo; B. J. Many, Chicago; C. H. Halsted and E. E. Frauenheim, Jr., Buffalo.



salvage and in one test with the Tag the moisture reading was 6 per cent higher than it really was because there were small particles of charcoal and the Tag could not get the test for that reason. It was off about 5 or 6 per cent.

MR. FRAUENHEIM: We have to get things done in a hurry in our port, perhaps having to load a couple of cars to go to Europe in the next hour.

LEWIS INKS, Akron, O.: Our experience with the three testers is that the Steinlite is slightly higher than the Brown-Duval and slightly lower than the Tag. It is in between. The department says use the Tag unless you can run samples on the Brown-Duval and this is official. We equalize our samples for 24 hours before we make the tests.

MR. POULTON: In Canada we have no trouble. We simply take what the government says.

PRES. MANNING: We have to make tests sometimes on mixed corn. The only way I see is to revert back to the Brown-Duval and then you will get the right moisture test. We mixed a bin of 21 per cent and 12 per cent corn

together in order to determine how long it would take before that corn would show up on the Tag or Steinlite as uniform moisture corn. It took 8 days. We ran the test under government supervision and drew off 500 bushels a day to make the test. It was 8 days before all samples tested alike. That was 2 years ago. The figures are available through the department if anybody wants them. I think if we get another year or two of wet corn crops we will be back to the old Brown-Duval.

MR. OLSEN: We have been working in my state with the object of adopting something like your Canadian system of inspection. When we have finished trying it out we will be in a better position to say. So far we have found it very good.

### Safety and Plant Activities

MR. OLSEN: Besides the usual sickness and accident insurance, etc., I feel that safety contests are an important factor in personnel relationships. If one of the plants go a year without accidents we throw a party and it is surprising what you can do with \$100, if the right person is spending it.

MR. HALSTEAD: We have various activities in our plant. The company has sponsored dinners, etc. We have just inaugurated a pension plan that has cost considerable, and we had 6 men go last year and 3 probably this, and that brings up the question of getting somebody to take their places. The problem is to train men who will be able to step into the positions of these key men, and the attitude of the union complicates matters considerably.

### Estimating Grain in Bins

C. H. HALSTEAD, Buffalo: I was asked by the secretary to mention our system of estimating grain stored in bins. With the help of an engineer and after making extensive tests and checking them carefully, we have evolved a formula that will do the work very well for us. It took us 14 months to do this, but we find it very satisfactory. For example, one bin weighed 1,551,250 lbs. with the scale and when rechecked by tape measurements it was estimated to weigh 1,553,800 lbs. That is a sample of how well it is working. The auditors have accepted our formula.

J. A. SMITH, Sarnia, Ont.: In Canada we have to be weighed up because the government is responsible for every bushel of grain. The Board of Grain Commissioners are very strict.

MR. FRAUENHEIM: Grain & Feed Journals, Chicago, published a series of articles on estimating grain in bins. I believe this is authoritative and should be studied by our members.

PRES. MANNING: To prevent the wearing of our loading spouts we have lined them with a cement coat which is applied over a small mesh chicken wire fastened to the spout with bolts. This is troweled in, and after the first few loadings through the spout this cement coat becomes as smooth as glass. We first used this method several years ago, and none of the spouts so re-lined has had to be re-lined the second time.

W. H. KAMP, Kansas City: We use the same method, but instead of cement we use lead. This, we find, fills up all the space between the wire mesh and the spout, thus preventing a breeding place for weevil.

MR. EVANS: Those of you who handle soybeans have had more or less trouble handling the beans so as to have a minimum of splits. Being round the beans come down a spout with great force, and naturally whirl and bounce around. To prevent this we have blocked the end of our loading spout, and when the spout is filled from the scale hopper to the blocked end we remove the block, and the beans drop in a continual stream, and while fast, they do not whirl and beat against the sides of the car. This method has caused a material reduction in the percentage of split beans.

MR. FRAUENHEIM explained his automatic shovel which was an outgrowth of the Ft. William-Port Arthur meeting. This gig is so arranged that the shovel returns after dumping a load to pick up another. The only manual operation is when the shovel is shifted from one end of the car to another. Mr. Frauenheim exhibited a model, which created much interest, especially from Mr. Richardson of car-dumper fame.

### Wednesday Morning Session

The dominant work of the Society being the promotion of safety, this feature was given the place of importance in this session.

"Dangerous Dusts," the U.S.D.A. sound picture, was shown, following a brief talk on dust explosion prevention work by Sec'y Clark.

S. C. KLAUS, Chicago, showed his moving pictures taken during the fire which destroyed the 2 Norris and 3 Calumet Elevators in Chicago.

W. DEAN KEEFER, Chicago, talked on Preventing Accidents and Injuries. His pictures depicting the Grim Reaper's quest for victims brought home in convincing manner

### With Superintendents in Toronto



Top, l. to r.: G. S. McPhee, Winnipeg; Sec'y Dean M. Clark, Chicago; Vic Reid, Minneapolis.

2d row, l. to r.: Norman Boadway, Collingwood; Vic Oliver, Minneapolis; Harry Olson, Chicago; Jim Mackenzie, Three Rivers.

Bottom row, l. to r.: G. J. Shaw, Port McNicoll; Fred Sibbald, Fort William; Oscar Olsen, Duluth.



how careless we all are, and the necessity of avoiding the taking of uncalled for chances.

### Safety Awards

The Society conducts two Safety Contests, one, an annual contest participated in by those elevators and allied plants which pay the safety contest fee of \$5. The second is for those who at the end of the year turn in to the Safety Committee the best all time record.

The following awards were made by Pres. Manning:

#### Class A, Annual Contest

First—Hart-Carter Co. cup to Oscar Olsen, Peavey-Duluth Terminal, Duluth, Minn., 91,620 man hours without lost time accident.

Second—Ben J. Many Corp. cup to Percy C. Poulton, N. M. Paterson Co., Ltd., Fort William, 60,768 man hours without lost time accident.

Honorable Mention: Frank McLean, Superior Elevator Co., Ltd., Port Arthur, 33,392 man hours, and John Goetzinger, Rosenbaum Bros., Omaha, 23,032 man hours.

These four were the only ones listed in the contest which came through the year without a lost time accident.

#### Class B, All Time Contest

First—H. H. Robertson Co. cup to Frank McLean, whose last lost time accident occurred in Oct., 1935, since then has worked 118,948 man hours without lost time accident.

Second—Appraisal Service Co. cup to Oscar Olsen, last lost time accident Oct., 1938, since then has worked 97,985 man hours without lost time record.

Honorable Mention: Percy C. Poulton, Aug., 1938, 88,658 man hours; W. H. Kamp, Kansas City, June, 1939, 69,849 man hours; G. J. Shaw, Port McNicoll, June, 1939, 63,458 man hours.

Every elevator and processing plant was urged to participate in the safety contests by Pres. Manning, who called attention to the fact that the promotion of the safety program not only meant the prevention of lost time accidents, but resulted in more efficient plant operation.

M. FRANK BEYER, Fort William, sent a paper on The Mighty Oak Was Once a Stripling, which was read by Pres. Manning.

### Final Session

R. B. MORLEY, Industrial Accident Prevention Ass'n, Toronto, told of the work of his ass'n in the prevention of accidents.

The Auditing Committee report was read by Mr. Pow, and revealed a material betterment in the financial condition of the Society. The report was accepted.

The recommendations of the Nominating Committee, also read by Mr. Pow, were accepted without opposition. They were: Pres., P. C. Poulton, Ft. William; 1st vice-pres., Paul Christensen, Minneapolis; 2d vice-pres., H. L. Henrikson, Sioux City; Gilbert Lane, Chicago, director to succeed Mr. Henrikson; other new directors for three years: Andrew Rankin, Montreal, representing the malting plants; H. C. Brand, Cedar Rapids, representing the cereal plants, and W. A. Thomson, Jr., Louisville, the feed processing plants.

PRES.-ELECT POULTON took the chair and expressed appreciation for the vote of confidence and assured the Society of his every effort to make his year in office one of great success. He was followed by the other newly elected officers, each of whom pledged his cooperation with Mr. Poulton.

The report of the Committee on the Name, which reconsidered the change in name, brought in a recommendation that no change be made. It was suggested, and approved, that to avoid confusion, all letterheads and printed matter carry a clause clearly setting forth who is and who is not eligible to become a member. A change in Art. 3, Sec. 2, of the Constitution to be made to cover this clause. Approved.

Invitations for the next annual meeting were presented by different cities, but Maynard Losie and his cohorts put it over for Minneapolis, and the date was set, June 9, 10, 11.

### Associates' Night

The festive closing of the business sessions of the Society is always looked forward to with a great deal of pleasure. Each year the last night of the convention is turned over to the associate members of the Society, and through their courtesy all those attending the convention are entertained, following a sumptuous meal, with music, singing and dancing acts, legederman and but few speeches.

Following the dinner toasts to the King and the President were proposed by Grover C. Meyer, Kansas City, master of ceremonies and permanent chairman of the Associates Night Committee.

The new officers and directors were introduced and each received a round of applause.

The highlight of the entertainment was the whistling of Mrs. J. Brunell, daughter of G. J. Shaw, supt. C. P. R. Elevator, Port McNicoll, and the singing of Miss May Wilkinson of Midland, who pleased the Scotsmen with her rendition of the better known Scottish songs.

### Exhibits

Harry B. Olson exhibited a Cargill Grain Sampler.

Superior Separator Co., represented by Vic Oliver, exhibited a glass front model showing the working of the company's cylinder separator.

Ben J. Many Corp. exhibit consisted of photos of work the company has done in re-finish outside walls of concrete elevators. In addition to Mr. Many, other representatives were C. L. Highbie and H. W. Webb-Peploe. The company's suite proved very popular.

Victor H. Reid, representing Hart-Carter Co., had a table well stocked with literature descriptive of the company's products. His familiar notebooks were handed out freely.

### Convention Notes

Toronto Elevators, Ltd., kept open house throughout the convention, they spared neither expense nor effort in entertaining the visitors.

Jim Shaw brought his fiddle along and convinced Pres. Manning he had lost none of his cunning as a fiddler.

E. J. Martin, representing Norfolk & Western Ry. Co., was on hand to tell about the advantages of his port.

As usual the stores and shops came in for attention, many of the visitors from the States bringing back souvenirs of their visit.

### Visiting Superintendents

J. Belanger, J. R. Gibson, Ralph Hetherington, L. C. Irwin and son Robt., Clarence S. Maxwell, P. C. Poulton, R. B. Pow and Fred A. Sibbald, Fort William; John Burton, Hugh Grant and Frank J. McLean, Port Arthur; W. H. Biggar, Port McNicoll; Norman D. Boardway, Collingwood; H. C. Brand, Cedar Rapids; P. H. Christensen, Minneapolis; J. R. Coughlin, Minneapolis; Elmer B. Enger, Buffalo; Earl R. Evans, Champaign, Ill.; Edw. E. Frauenheim, Jr., Buffalo; C. H. Halstead, Buffalo; N. E. Heels, Owen Sound; H. L. Henrikson, Sioux City; Clem Herdegen, Buffalo; H. J. Hixon, Kansas City; Lewis Inks, Akron; W. H. Kamp, Kansas City; Sandy Keir, Chicago; F. M. Losie, Minneapolis; J. H. Lyle, Buffalo; T. C. Manning, Kansas City; John Murioss, Goderich; Hugh McIntyre, Midland; James Mackenzie, Three Rivers; E. I. Odell, Kansas City; O. W. Olson and Walter Teppen, Duluth; R. E. Preston, Midland; G. J. Shaw, Port McNicoll; J. A. Smith, Sarnia; W. A. Thomson, Jr., Louisville.

### The Ladies

Although the number of ladies present did not equal that of former years, those present were showered with every attention. Shopping trips, the theater, inspection of the Royal York Hotel, and through the courtesy of the Toronto Elevators, Ltd., a trip to Niagara Falls, where [Concluded on page 302]

## Receiving Books For Grain Buyers

**Wagon Loads Received.** A good form used extensively in recording wagon loads of grain received from farmers. Tare weight is entered immediately under gross to facilitate subtraction. Contains 200 pages of linen ledger paper, and is ruled 20 lines to a page, thus accommodating 4,000 wagon loads. Separate pages may be devoted to each kind of grain to each farmer, or wagon loads may be entered in the order received. Well bound in cloth, with keratol back and corners. Order Form 380. Price \$2.50. Weight 2¾ lbs.

**Receiving and Stock Book** for keeping a record of each kind of grain received in separate columns, so buyer may easily determine total amount of any kind of grain on hand. Size 9¼x11½, 200 pages, with a capacity for 4000 wagon loads. Well printed on linen ledger paper, bound in strong board with leather back and corners. Order Form 321. Price \$2.50. Weight 2¾ lbs.

**Scale Ticket Copying Book** contains 150 leaves of scale tickets, four to a leaf. Each leaf folds back upon itself, so that with the use of carbon paper, it will make a complete copy of the original on the stub, with one writing. Original tickets forming the outer half of leaf are machine perforated. Printed on bond paper, check bound, size 9¼x11, supplied with four sheets of carbon. Order Form 73. Price, \$1.30. Weight 2 lbs.

**Grain Scale Book,** a combined Journal and Receiving book with index. Each man's grain is entered on his own page, or a page may be allotted to each kind of grain received. Both debits and credits are posted to the ledger. Contains 353 numbered pages and index, size 10¼x15½, and will accommodate 10,382 wagon loads. Printed on linen ledger, bound in extra heavy black cloth covers, with leather back and corners. Order Form 23. Price \$4.00. Weight 5 lbs.

**Grain Receiving Register** is designed for recording the receipts of wagon loads of grain. Loads may be entered in consecutive order, or different sections of the book may be devoted to different kinds of grain. Book contains 200 pages of linen ledger paper, size 8¼x14 inches, each of which is ruled for 41 entries, giving a total capacity of 8200 wagon loads. Well printed and substantially bound in full canvas. Order Form 12AA. Price \$2.50. Weight 3 lbs.

**Duplicating Wagon Load Receiving Book,** designed to facilitate the recording of number of loads from one farmer in a short time. Book contains 225 leaves, size 12x12 inches with 33 lines each, perforated down the middle; the inside half of the leaf remains in the book, and the outer half with the same ruling printed on the reverse side, folds back over the left half with carbon between. Outer half is given to farmer. It may also be used by line agents in making daily reports to headquarters. Check bound with canvas back, nine sheets of carbon. Order Form 66. Price \$2.60. Weight 4¾ lbs.

**Grain Receiving Ledger,** may be used first as a Stock Book by posting the receipts daily, weekly or monthly from some other portion of this book, or from any other scale book, giving a page to the commodity handled; Second, as a patrons' ledger, by giving a full or half page to each patron; Third, pages may be used to enter each load of grain received in consecutive order under their respective commodity headings. The book contains 200 numbered pages with 44 lines each, and marginal index in front, size 8¼x13¾, ruled with the usual column headings, including Debit and Credit columns. Printed on linen ledger paper and well bound in black cloth sides with keratol back and corners. Order Form 43. Price \$3.00. Weight 2½ lbs.

Form 43XX contains 400 pages same as above. Price \$5.00. Weight 4½ lbs.

All Prices are for Chicago Delivery.  
Postage Extra.

Printed and Supplied by

## Grain & Feed Journals Consolidated

332 South La Salle St. Chicago, Ill.



# Insects In Stored Grain and Their Extermination

Insect infestation of grain is a puzzling problem originating on the farm. Not knowing how to get relief from the insects the farmer gets rid of the grain and insects together by dumping them on the grain buyer.

Always with us, the insect problem is worse in some years and in some localities. In Alabama in 1912 weevil damaged the state's 54,000,000-bu. corn crop at least \$4,000,000. In 1924 in Pennsylvania the state suffered a loss of \$1,000,000 to \$3,000,000 thru the depredations of the Angoumois grain moth on the wheat crop.

The loss of Southern corn thru insect attack ranges from 2 to 75 per cent according to U.S.D.A. entomologists. In Maryland at harvest time wheat in some counties showed an infestation of 2 per cent, and where harvest had been delayed the infestation by the Angoumois grain moth reached 90 per cent.

Coming from farm granaries where they have lived over the winter the Angoumois grain moth and the rice weevil fly to the nearby fields of wheat and corn nearing maturity and lay eggs, to be harvested unwittingly by the farmer with the grain.

Of the total number of inspections made in Oklahoma of wheat arriving at market from farms from Sept. 3, 1919, to Dec. 31, 1919, the percentages of carloads reported infested by rice weevils and Angoumois grain moths for each of the 17 weeks beginning with the week of Sept. 3 were 17, 30, 55, 44, 69, 78, 88, 75, 90, 82, 66, 67, 80, 75 and 58 per cent respectively.

At Sherman, Tex. in July and to December 1920, 88.7 per cent of the wheat and 79.5 per cent of the corn were found infested by the rice weevil and the Angoumois grain moth.

AN EXTRAORDINARY INFESTATION began in 1939 and is being carried over into the spring of 1940.

Elevators located in the lower altitudes of the Pacific Northwest began showing weevil infestation the middle of January, 1940, the mild winter having promoted rapid multiplication.

Compliance with A.A.A. control at the present time is keeping much grain back on the farms having no equipment for insect control. To check on the many reports coming in of serious insect infestation in Kansas a miller accompanied by a representative of the Department of Agriculture took samples from 28

bins scattered thruout one county. A one quart sample taken from each bin, upon examination, showed the presence of an average of 21 insects per quart of grain, and in some instances the number of insects in the sample ran as high as 205. General reports indicate similar conditions in other parts of Kansas and thruout the Southwest. Translating this sample data into terms of carloads of grain, one carload of 1,500 bus. might easily contain 10 million insects if the grain were infested in the same proportion as some of the samples examined.

A survey of the 6,600 farm bins in Kansas in which wheat has been impounded under government loans showed weevil in 1,754 of them. In 200 of these the damage had gone beyond repair.

Inexperienced county com'itemen operating under the A.A.A. permitted weevil infested corn to be placed in some of the government owned steel bins without even annoying the insects.

"Weevil infestation in winter wheat stored on farms and in country elevators is unusually prevalent this season," states the Federal Grain Supervision of the U. S. Dept. of Agriculture.

"Reports show that the infestation in the Missouri, Mississippi, and Ohio Valleys is the most severe in 20 years.

"The percentage of weevily hard red winter wheat received at important markets during October this year, compared with October, 1938, is Enid, Okla., 38 per cent with 28 per cent; Fort Worth, 19 per cent with 10 per cent; Kansas City, Mo., 20 per cent with 6 per cent; Omaha, 33 per cent with 12 per cent; and Wichita, 49 per cent with 28 per cent.

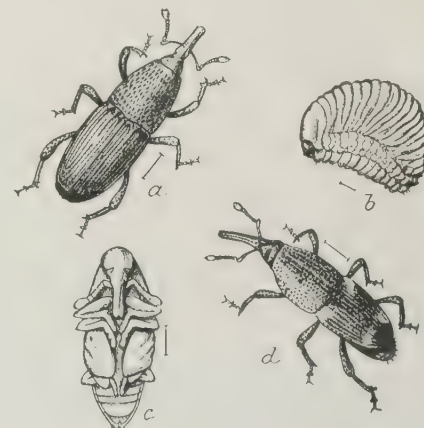
"For soft red winter wheat, the October comparison at important markets is Buffalo, N. Y., 7 per cent with 11 per cent; Chicago, 14 per cent with 8 per cent; Cincinnati, 26 per cent with 17 per cent; Indianapolis, 29 per cent with 37 per cent; and St. Louis, 67 per cent with 51 per cent.

"Wheat stored with a high moisture content is conducive to the development of insects injurious to stored grains. A relatively high percentage of the grain put into storage in the Missouri, Mississippi and Ohio Valley sections showed high moisture this year."

FOUR INSECTS do most of the damage. These are the grain weevil, rice weevil, lesser grain borer and Angoumois grain moth.

The bran bug, broad-nosed grain weevil and Mediterranean flour moth also do damage.

THE GRAIN WEEVIL, *Sitophilus granarius*, is a small, chestnut-brown beetle, not more than three-sixteenths of an inch long. It is shown six times enlarged in the engraving. It is found the world over and favors temperate climes such as our Northern States. The larvae and adults feed voraciously on all kinds of grain. The adult lives 7 to 8 months, the female laying 50 to 250 eggs. The female bores a small hole in the wheat berry with her mandibles, turns about and lays in it an egg, which she covers with a gelatinous fluid to seal it in



Granary Weevil; a, Adult; b, Larva; c, Pupa; d, Rice Weevil.

the hole. The grubs that hatch out burrow about inside the kernel. In warm weather four weeks' time is required from egg to adult.

THE RICE WEEVIL, or black weevil, *Sitophilus oryza*, is shown at d, in the engraving. It is brown to black in color, differing from the grain weevil in having wings beneath its wing covers, which have four light colored spots. It is prevalent in the Southern States where it causes great loss to corn. The adult lives 4 or 5 months, each female laying 300 to 400 eggs. It is well able to fly from granaries to fields.

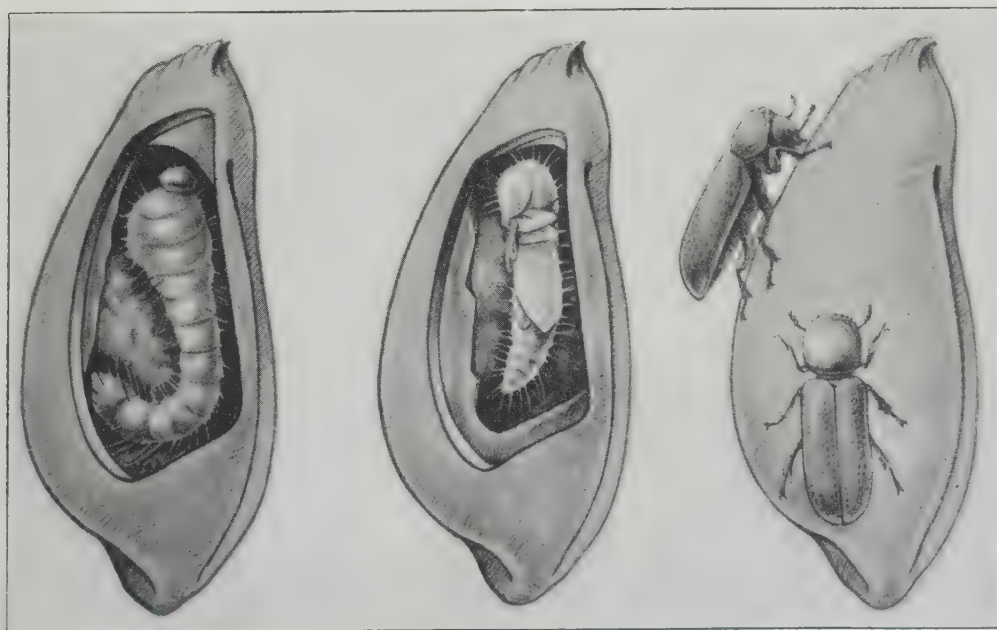
THE BROAD-NOSED GRAIN WEEVIL, *Caulophilus latinasus*, is dark brown, resembles the grain weevil, but has a broad snout. Unable to breed in hard grain it attacks soft or cracked kernels. It is a strong flier. Living about 5 months, the female lays 200 to 300 eggs. In Florida it is a serious pest of stored grain and is found in Georgia and South Carolina.

LESSER GRAIN BORER, *Rhizopertha dominica*, the Australian wheat weevil is widespread in the Gulf States. It is a dark-brown elongated cylindrical beetle about one-eighth of an inch in length. Its powerful jaws can cut directly into wood. A native of the tropics, it has spread to all parts of the world.

The female drops eggs singly or in clusters on the loose grain, where they hatch in a few days, the whitish grubs feeding on the flour produced by the boring of the beetles. The period from egg to adult is said to be about a month.

THE ANGOUMOIS GRAIN MOTH, *Sitotroga cerealella*, attacks all cereal grains, in the field and in store. The female, having a wing spread of one-half inch, may lay 400 eggs on or near the grain, the minute white larva boring into a kernel of grain. When full grown it eats its way out but leaves a thin layer of the seed coat unbroken.

The puncture made by the larva entering the kernel is so small the presence of the grub can be detected only by cutting open the grain and inspecting the interior. In the engraving are



Left to right: Well Grown Larva, the Pupa, and Two Adult Lesser Grain Borers. From U. S. D. A. Bull. 1260.



shown the various stages of development and an ear of corn with the emergence holes.

**EXTERMINATION**—These insects are killed by heating the grain or fumigating. The fumigants may be bisulphide of carbon, hydrocyanic acid gas, chloropicrin, or several liquid or gaseous fumigants sold under trade names.

**HEATING** in all parts of the building to 125 degrees F. for 12 hours will destroy all insect life.

**SPACE FUMIGATION** on the work floor of the grain elevator, in feed mills and warehouses may be accomplished by the hydrocyanic gas method described herewith, by chloropicrin or bisulphide of carbon.

**CHLOROPICRIN** is a colorless liquid that boils at 112.4 degrees C., and has a specific gravity of 1.092, that is, it is 9 per cent heavier than water. The molecule of chloropicrin is 200 times as toxic to insects as bisulphide of carbon.

One-half pound of chloropicrin to 1,000 cubic feet is destructive to the bean weevil, the Angoumois grain moth, the Indian meal moth and the Mediterranean flour moth. For the confused flour beetle it is necessary to use 1 or 2 pounds per 1,000 cubic feet. For an assured kill of the grain weevil 2 pounds of chloropicrin should be used for 1,000 bus. of grain. In an open bin where the gas is less efficiently confined it may be necessary to use 3 pounds per 1,000 bus. Oats absorb more of the gas and it is necessary to add 1 pound more per 1,000 bus.

The procedure is to sprinkle the liquid on top of the grain in the bin. It turns into a vapor and sinks down thru the mass of grain.

When the grain to be treated is very cold more time and a greater concentration are required; but the authorities do not state what percentage of the weevils is killed at different temperatures.

A better plan is to allow the liquid to flow slowly on a stream of grain being spouted into a bin. Bins or rooms in a building require only 1 pound of chloropicrin per 1,000 cubic feet of space, 24 hours exposure being ample. In a bin of grain an over-night treatment may be sufficient.

Before grinding the grain or baking the flour or using the grain for seed a thorough airing is necessary to remove all traces that might prevent fermentation or germination. If well aired the products are not affected in any way.

Chloropicrin is shipped by the manufacturers in steel cylinders containing 25, 50, 100 and 180 pounds. Smaller quantities are purchasable in

a case of 12 one-pound glass bottles, each bottle in a metal can for protection.

Chloropicrin kills the eggs, larva, pupa and adult. It is sold under the trade name Larvacide by Innis, Speiden & Co., who supply detailed instruction for various methods of application.

**CALCIUM CYANIDE** sold under the trade name Cyanogas as a grain fumigant is of a grade specified as Cyanogas G-Fumigant, which is comparable to sea sand in size, flows and sifts freely, and is dustless in application. The granules release hydrocyanic acid gas (HCN) slowly.

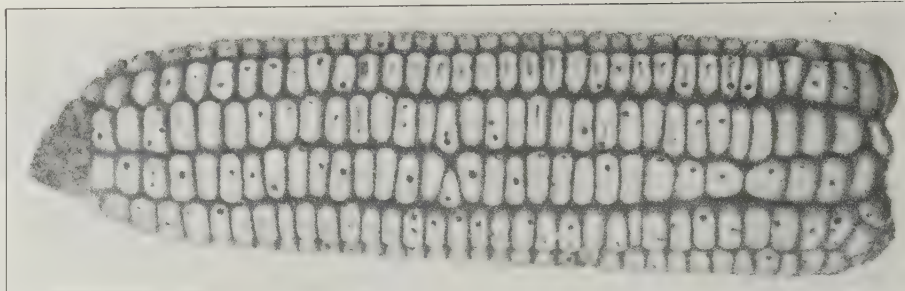
When Cyanogas is mixed with grain, the gas permeates the entire mass of grain in the bin, and all insect infestation is speedily and completely exterminated. The gas gradually dissipates, leaving only 7½ pounds of harmless lime granules in each sixty thousand pounds of grain. A slight odor of gas may remain in the grain for a short time, but not permanently.

Cyanogas is recommended for fumigation of all grains except white corn, in closed-top steel, concrete or covered wooden cribbed bins, either hopper or flat bottomed.

Cyanogas G-Fumigant may be applied safely to grain stored in all types of closed top bins by using a Cyanogas grain applicator.

The dosage for closed top steel and concrete bins is ten pounds of Cyanogas for each 1,000 bus. of grain. The dosage for closed top wooden cribbed bins is, because of the factor of leakage, twenty pounds of Cyanogas per 1,000 bus. of grain.

Cyanogas treatment will not affect the germination or milling qualities of grain. It will not affect the ash content of flour. It will not affect loaf volume or quality of bread.



Ear of Corn Infested by the Angoumois Grain Moth.

**BISULPHIDE OF CARBON**.—Policies of the mutual fire insurance companies contain a clause: "This policy shall be void if the assured does now keep, or hereafter keeps, uses or allows bisulphide of carbon in any of the buildings described in this policy."

The bin is made air tight and walls are swept clean. The bisulphide is poured on top of the grain in the bin, evaporates and sinks down. About 1½ pounds per 1,000 cubic feet should be enough. The liquid does not injure the grain. It is more effective in hot weather. All fire and naked lights must be kept away, and the operator should avoid breathing it. The elevator should be aired thoroughly before entering.

**METHYL BROMIDE**, one of the newer fumigants, is most promising of results. It has been used as a fire-extinguishing chemical and boils at 4.5 degrees C.

**ETHYLENE OXIDE** mixed with 9 parts by weight of solid carbon dioxide (dry ice) is a good fumigant.

**ETHYLENE DICHLORIDE**, three parts and carbon tetrachloride one part, make a good fumigating mixture.

**CARBON TETRACHLORIDE** has little toxicity, and is mixed with other fumigants to reduce the fire hazard.

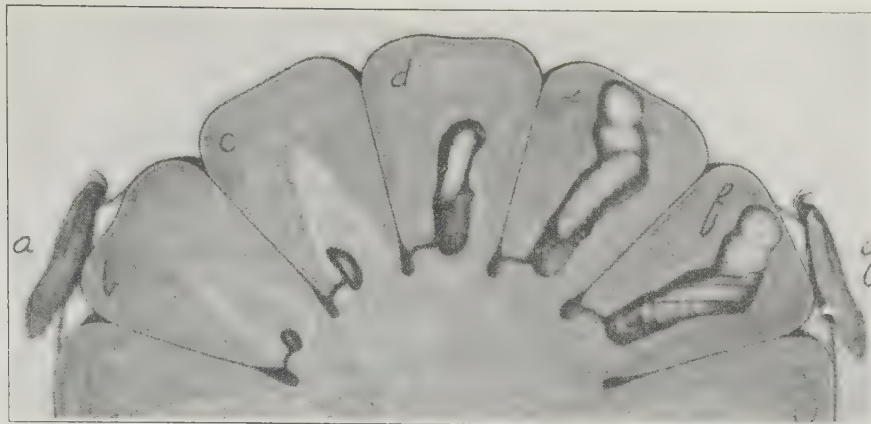
**RADIO** waves have been successfully used in an experimental way to kill insects in grain by Jesse H. Davis, who has been granted letters patent No. 1,972,050.

**HYDROCYANIC ACID GAS** is as effective as chloropicrin and like it, has no fire hazard. It is effective at temperatures as low as 40° F. Greater precautions must be taken, however, to avoid inhaling the gas, as it is deadly to humans as well as insects. Originally it was generated by dropping small paper bags



A Typical Example of Damage to Wheat Kernels.





Cross Section of Ear of Corn Showing Six Stages of Development of Angoumois Grain Moth.

of potassium cyanide into dilute sulphuric acid. Sodium cyanide is cheaper, and is conveniently supplied in the form of eggs known as Cyanegg for dropping into the acid. Each of these eggs weighs one ounce; and they are manufactured by the E. I. du Pont de Nemours & Co. The gas also may be generated by treating the grain with calcium cyanide in powder or granules, the moisture in the air combining to form the gas. This is supplied under the trade name Cyanogas by the American Cyanamid & Chemical Corporation, which also supplies the gas in liquid and other forms.

Hydrocyanic acid gas is generated by placing cyanide in sulphuric acid ( $H_2SO_4$ ). The cyanogen (CN) which is poisonous combines with the hydrogen (H) of the acid to form the gas HCN. The chemical reaction is the simplest and all preparations are directed to distribution of the gas and the safeguarding of the life of the operator.

The quantity required is one pound of sodium cyanide or Cyanegg, for 1,000 cubic feet of space. For each pound of cyanide allow  $1\frac{1}{2}$  pints of commercial sulphuric acid and 2 pints of water.

The acid and water should be distributed in the different rooms in stoneware or china crocks, or wooden pails. The acid should be poured into the water, not the reverse, each crock to contain sufficient water and acid to act upon three pounds of cyanide, the crocks having a capacity of two or three gallons each. The cyanide is tied up in three-pound paper packages, and one package suspended over each crock by a string from the ceiling into which a screw eye has been screwed. All the strings from the screw eyes are gathered to one point near the door where the operator is to make his quick exit.

The use of wooden barrels, as well as crocks and pails, is recommended, making it possible to release larger and more concentrated charges. For added safety to the workers boards or other covers may be placed over the barrels to avoid premature accidental dropping of the cyanide bags, the boards to be removed as the last operation before leaving the room.

Starting on the top floor the operator lowers the cyanide into the crocks containing the acid and water, closes the door and goes to the next floor below and repeats in each story below to the basement. Do not attempt to escape by ascending a stair in the room after the cyanide has been dropped into the liquid because it is too hazardous. Doors should be barred to keep strangers out.

After 24 hours the doors and windows should be opened for half an hour or longer to allow the gas to escape and in tight rooms and basement much longer, before entering. Entry should be postponed until after all the characteristic peach pit odor has disappeared.

The strongest acid should be purchased, if of weaker strength more must be provided.

The gas will kill all insects and vermin and all larvae.

## Stored Grain Insects — 1940

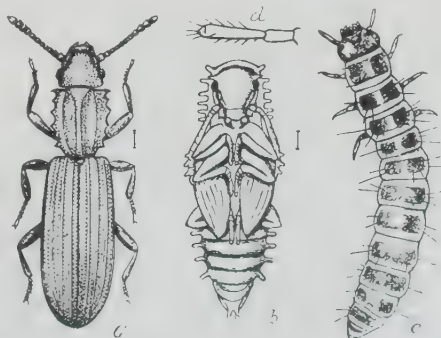
By M. D. FARRAR, Research Entomologist, Urbana, Ill., of the State Natural History Survey Division.

Before predicting what stored grain insects may do in 1940, it is first necessary to look back into 1939. Perhaps we might go back even farther and consider the three mild winters of 1936, 1937, and 1938. Even in crib storage not enough of the severe cold weather occurred during these winters to kill infestations of insects. Repeated generations of stored grain insects thru these years have built up insect populations that have found the present large volumes of stored grain much to their liking. During this period insects have had excellent breeding conditions on farms, in elevators and warehouses thruout the state.

A recent survey of our 1939 crop now in storage indicated that all corn from south of a line through Edgar, Christian and Calhoun Counties carried some damage to the corn kernels before it was harvested. This field damage is considerably above that found in a similar survey made in 1938. In addition, there are scattered field infestations 50 miles or more north of this line.

We have followed the insect developments in the 1938 corn crop, from harvest thru the past winter and summer, and finally the storage of this corn as shelled corn in bins. This record is a basis for speculation as to what may happen to either the 1938 or 1939 corn crop in storage.

Where insects are involved in corn shelled last fall, some trouble may be expected in storage. Unless insect activity is stopped either by fumigation, handling methods, or cold weather, the infested grain may continue to give trouble in 1940. It is our observation that most of the shelled corn now in storage carries some insect infestation. All such grain should be examined at frequent intervals to determine its condition during the storage period. Examinations will be particularly important next spring and summer.



Bran Bug; a, Beetle; b, Pupa; c, Larva; all enlarged; d, Antenna of Larva, more enlarged. After Chittenden, U. S. D. A.

In the southern section of Illinois where a heavy crib infestation of Angoumois grain moth now exists, the 1939 crop is subject to severe damage. Probably little further damage will occur until after May 1 next. Corn that can be either fed or shelled and treated by May 1st will suffer only a minimum of loss. Holding infested corn thru the summer of 1940 will not be safe unless the winter is sufficiently cold to reduce greatly the infestation that now exists.

Corn storage is more favorable thruout our major corn-producing area in central and northern Illinois. Continued cold weather may provide a safer storage condition than we had in 1939. There are, however, several grain insects that may give trouble in stored grain thruout Illinois. Among these is the Indian meal moth, that particularly likes stored soybeans.

The Indian meal moth is widely distributed and may give trouble in warehouses, seed storages, and on farms. It feeds on a variety of products, which in turn are constant sources of reinfestation in storage plants.

The rice and granary weevil are both widely distributed and may show up in corn, wheat, rye, or barley wherever these are stored.

A group of small beetles, generally classed as "bran bugs," are in most of the shelled corn and small grain thruout the state. When conditions are favorable they can increase to a point where the grain will heat. Where this has occurred, moisture damage has followed in the grain. Probably the most important insect of this group is the saw-toothed grain beetle.

TO SUMMARIZE: Grain insects are very abundant in grain stored as shelled corn, or small grain. In the southern one-third of the state ear corn is heavily infested with Angoumois grain moth. Movement of this corn before next summer may be advisable. Where grain is in storage during 1940 frequent inspections should be made to determine its condition. Infested grain must be treated, moved, or marketed if losses are to be avoided. Severe cold weather during the winter of 1940 may reduce the losses from stored grain insects.

## Books Received

**WORLD WHEAT PLANNING, and Economic Planning in General**, is a veritable factual encyclopedia of wheat. Each of 47 nations is given a chapter followed by 56 Appendices, covering some 200 pages and containing full information on acreage, yield, production, trade, consumption, stocks, costs of production and transport, prices of wheat, prices of bread, etc. Included in the appendices are a list of international cartels and combines; an index showing the disparity between the prices received by farmers for their produce and the prices paid by them for non-agricultural goods; the conditions necessary for the co-ordination of production and marketing of all primary products. The author, Paul de Hevesy, is a Hungarian diplomat of 30 years' standing, who raises economic, political, social and philosophical implications of planning, and the question is discussed whether competition, as an economic system, is only a passing phase of human history, or whether it is inherent in man's nature and irradicable. The ways and means of planning, and their results under different systems of government are investigated. Answers are suggested to a number of burning questions, such, for instance, as—Should a country grow, raise and produce the maximum quantity possible of all goods, irrespective of price? Can economic prosperity be influenced by State control of quantities, stocks and prices of basic commodities? What will be the future of agriculture, and what are its possibilities? In what way can agriculture influence health, nutrition and national fitness? What new uses will be found by industry for agricultural products? Cloth, 912 pages, indexed, the Oxford University Press, New York and London. Price \$12.00.



## Exporting Grain Thru St. John

By T. C. MACNABB, Gen. Supt. C. P. Ry.,  
Before Society of Grain Elevator Superintendents, Toronto.

At Saint John, New Brunswick, we have a port that is ice free the year around and we have two elevators there. So far as the elevators themselves are concerned they are much the same type as those that are familiar to you, being the circular bin type of reinforced concrete. One of the elevators has the standard unloading arrangement inside of it and the other has a detached unloading arrangement where cars are handled and then conveyed to the elevator from the unloading house.

We have two elevators and neither of them is actually at the water side. In general our business is to take grain out of the cars and get it into the ocean going ships. As these ships are also discharging and taking on cargo at the same time, we have to leave the face of the wharf free for the movement of package freight. That is what necessitated the location of the elevators back from the wharf side.

**Ship Multiples of 8,000 Bus.**—There is one peculiarity about this Elevator "B" and it is that the bins are small. We have 94 bins that hold 1,500 to 2,000 bushels only and 77 bins that hold 8,000 bushels. The reason for selecting 8,000 bushels is because in marine practice the ships carry what they call a load, and a load is 8,000 bushels. The orders placed upon us are that a ship will take two loads or five loads, or whatever number they want, and we are required to put into the ship multiples of 8,000 bushels, so that when we have grain in elevator bins that hold just 8,000 bushels that is an advantage. In the larger elevator, which holds one and a half million bushels as against one million for the smaller elevator, there are 24 bins that hold a load each, 8,000 bushels, and 36 bins that hold forty thousand bushels each, which as you see is five loads.

In Elevator "B", the grain is unloaded from cars in the standard way and is elevated directly to the top of the elevator and through

Mayo spouts is discharged to the bins. In the larger elevator there is a car dumper, which is in duplicate, capable of handling two cars separately at the same time. The mechanical dumper picks up the car, elevates it, turns it over on its side and then end to end until practically all the grain is out. The rate is 12 cars of 2,000 bus. an hour. This does away entirely with elevator shovellers. The grain is then elevated to the conveyors and travels along the track and across to the regular elevator for loading out subsequently.

Practically all the berths have elevator conveyors upon them. These are carried on steel towers that are about 25 ft. high and on top of the towers there is a corrugated iron gallery inside of which the conveyor belts run. We have a matter of two miles of conveyor galleries and something over eleven miles of belting. All of this belting is electrically driven by motors located at the necessary points. The galleries are all connected by telephones so that the elevator operators will be able to give their instructions directly to the power house.

**Traveling Loader**—For taking the grain into the ships along the face of the galleries there is a traveling loader which runs upon wheels on the face of the wharf and is connected to the discharge belting. The loading operator stays in the loader and sees that it is moved to the several hatchways as the ship requires the grain. One unusual feature here is the fact that the spouts going down from the loaders are all telescopic. They can be as short as 20 feet and as long as 50 feet. This extension of the spout is controlled by the man in the loader. The telescopic spout is necessary because at Saint John the tide today has a rise and fall of 22 feet, and on the spring tides a little later we will get as much as 28 feet. That takes place on the 24th of this month. So you can see that it is necessary to have some special arrangement to take care of the fact that the ship moves vertically through quite a distance. You must not feel that such a variable tide is entirely unusual because at the port of Bristol, which does a very good business in

England and is in the grain business, there is a variation in the tide of about 40 feet. On the conveyors we are able to put in an average of about thirty thousand bushels an hour to each berth, so that we have plenty of capacity for delivering.

The largest cargo that we loaded out to a single ship was the SS. Strinda which took out 505,000 bushels. Normally tramp ships take a matter of 300,000 bushels and we are able to deliver this quantity in a matter of fourteen hours. This does not mean that the ship gets away in fourteen hours from the time that it comes in because most ships coming in for grain, although they take a full cargo, have to put in the necessary boards and prepare their holds for the handling of grain. You must understand that ocean ships that come to take grain are not built specially for grain handling but are cargo ships with normally at least four holds, and even after the ship has each hold filled it is necessary to trim the cargo so that not only will it be evenly distributed but also that it will be held in place if the ship happens to encounter rough weather.

Lloyds Inspector, on behalf of the insurers, insists that the cargo be properly trimmed. To do this the ship has to bag a certain amount of grain and place it along with flashboards in such a position that the lading will not shift in heavy weather.

We sometimes have a number of grades in the one ship and it is the custom to have burlap cloth which is spread on top of one grade and then the other one loaded upon it. The burlap is supposed to keep the various grades separate. In most ocean going ports the grain shovellers work in the hold while the grain is running but in Saint John the grain trimmers won't do that. They insist on stopping the delivery of grain while the ship is being trimmed. There was an occasion in the past when one of the shovellers was buried in the grain and that is one of the reasons why they refuse to trim the ship while the grain is being delivered. This year we have had 13 grades of wheat to handle and sometimes all

## Minnesota Elevator and Feed Mill

To meet the requirements of the farmers practicing a diversified agriculture in the well watered part of Minnesota along the Minnesota River the Caven Elevator at Franklin has found it good business to supplement grain handling with a complete feed service.

In rebuilding its burned elevator and mill adequate provision was made to grind and mix its own feeds as well as to do custom grinding. A separate driveway was built for feed patrons on the opposite side from the grain handling driveway.

The elevator is 28x35 ft., and 48 ft. from foundation to eaves, with an attached warehouse, and 16x16 ft. office building. The steel bins saved from the fire that destroyed the old plant increase the storage capacity to 25,000 bus. The 16 bins in the building are overhead, 6 over the driveway and 10 over the work floor, four of these designed to accommodate feed milling. More of the required working space is provided by the full basement under the entire plant. All walls and roofs are covered with galvanized iron of 26 gauge.

Grain is weighed in the main driveway on 20-ton, 26x9-ft. Fairbanks Scale with a grate 16x4 ft. and an Aero-Flex Truck Lift, and elevated by a leg having 10x5 Calumet Buckets spaced 8½ inch centers on an 11-inch, 5-ply belt pulled by a 7½-h.p. Fairbanks-Morse totally enclosed motor thru a worm gear. Head Drive, Roller bearings are used thruout.

Grain is delivered to the steel storage tanks thru a direct spout from the head of the elevator leg and returned to the boot of the elevator by a screw conveyor. A manlift along

the leg gives access to cupola and the Fairbanks Hopper Scale used for weighing out.

The feed mill equipment includes a 26-in. attrition mill driven by two 30-h.p. motors, a combined feeder-scalper and magnetic separa-

tor, and a 1-ton vertical feed mixer, all placed for delivery to the feed bins or to the feed driveway, which is 16 ft. wide and 40 ft. long.

This new plant was erected by the Hogen-son Construction Co.



Caven Elevator and Feed Mill at Franklin, Minn.



told we have had as many as forty grades. Naturally that makes it embarrassing for the elevator operator. With the number of small bins that we have there is not very much difficulty up to twenty grades but after that we have some embarrassment which slows up the delivery. We handle through Saint John the usual grain products—corn, including South American corn which comes into our country at times; buckwheat; bulk soya beans; peas; barley, oats and flax.

**The dust problem** we have the same as everybody else. There is one feature in Saint John that perhaps you do not meet and it is this—that we are not allowed to sweep the dust out into the harbor because the harbor authorities won't let us pollute the waters there. We could, of course, make some arrangement so that in the conveyors all the dust would be removed but unless some adjustment were made we could not afford to pay for the dust being weighed in, be at the expense of taking it out and lose the volume when the grain is loaded out. Normally it is not bad but, of course, you know that there is a distinct hazard in connection with it.

We had several years ago one explosion in our elevator which blew off the top of one of the bins and destroyed the corrugated iron head house of that elevator. There was no fire resulting as apparently the explosion escaped to the air practically at once. The investigation developed that the explosion was due to the fact that there was a broken steel fork tine which, when going through the discharge pipe, struck a spark igniting the explosive mixture in that particular bin.

Just the minute that the port of Montreal is closed, and there is a fixed date for this when insurance on ships in the St. Lawrence runs out, precisely that day the port of Saint John is going full force because the ships promptly arrive there and expect to get their full cargo and get away with the usual dispatch, so we immediately start business off from the first day

at maximum capacity. On the other hand the end of the season takes place over night.

The Canadian Pacific Railway Company owns one elevator in Saint John and the Dominion Government owns the other. For economical operation the railway operates both elevators under an agreement with the Federal Government.

### Transmission Controls Speed on Ear Corn Drag

When the 50,000 bu. elevator of the Ade Cooperative Elevator Co., at Ade (Brook p. o.), Ind., under operation by the Indiana Grain Cooperative, Inc., burned, Manager Ferd Nail replaced it with a temporary 3,000 bu. structure.

The frame, iron-clad, temporary structure is serving until such time as the organization decides to erect a permanent elevator. Consequently it was built as cheaply as possible.

An ear corn drag, and a chain and bucket elevator, purchased from Portable Elevator Mfg. Co., is employed in the temporary structure for elevating both ear corn and small grains. Right there is where Manager Nail found a problem. The standard coupling between the drag and its driving motor worked fine for ear corn, but was far too slow for small grains.

Manager Nail solved the problem with a

transmission from a Chevrolet truck motor illustrated herewith. This speed reduction unit was secured in a welded angle iron frame. On the driving shaft was fitted two sheaves to receive the two cog belts from the 3 h.p. power unit. The driven shaft was fitted with a sprocket wheel, and a chain to transmit power to the ear corn drag.

The transmission has four speeds forward and one in reverse. Manager Nail has no occasion for the reverse, nor for the direct "high" speed, which is too fast for any grain. But the transmission gives him three useable speeds on the drag that serves all grain receiving purposes.

The entire unit, including the special angle iron frame, cost him only \$20.

**S. W. Wilder**, of Cedar Rapids, Ia., has been named a member of the executive com'te of the Grain & Feed Dealers National Ass'n. to succeed the late Otto F. Bast. Mr. Wilder is a past president of the Ass'n and chairman of its country elevator com'te.

**Unlawful delegation** of legislative power to the secretary of agriculture and the president under the A. A. Act is alleged in a brief filed Apr. 3 in the district court at Chicago by the Wrightwood Dairy Co., which is resisting an order by Wallace regulating milk handlers.

## Shippers' Certificate of Weight

for use in advising receivers of the amount and grade of grain loaded into a car. Especially adapted for filing claims for Loss of Weight in Transit. Each certificate gives: "Kind of scale used; Station; Car Number and Initials; Shipper's Name;—lbs. equal to—bus. of No. —; Date scales were tested and by whom; car thoroughly examined and found to be in good condition and properly sealed when delivered to the —R. R. Co.; Seal Record, name and number, sides and ends; marked capacity of car; date; name of the weigher." On back is a form for recording the weight of each draught.

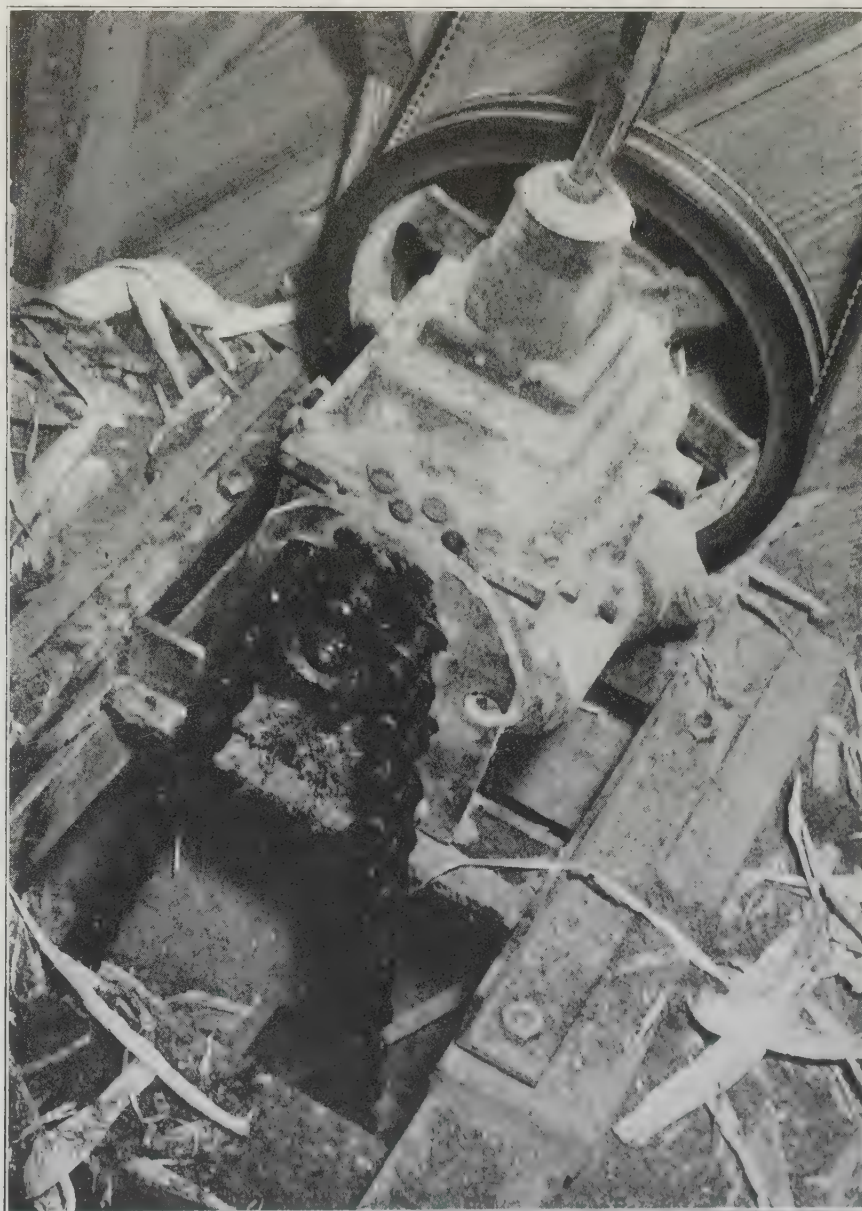
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Transmission Controls Speed of Ear Corn Drag



## Feeding Value of Hybrid Corn

By PAUL GERLAUGH, Ohio Exp. Station,  
Over Radio Station WHBC

About three years ago some livestock feeders reported unsatisfactory results in their feed lots where they were feeding hybrid corn.

It has long been recognized that there is a difference in the feeding value of corn due to color (white or yellow), season, and adaptability of variety to territory where grown. For instance, yellow corn is decidedly superior to white corn in feeding value, under many conditions. The pigment that gives the yellow color to yellow corn is also associated with vitamin activity.

We have obtained a popular hybrid corn that has grown in the same field with an open-pollinated corn that the farmer had been growing for several seasons and, therefore, we had two corns grown with comparable fertility and cultural practices.

During the winter of 1937-1938 three tests were conducted with pigs. Pigs use a very large proportion of corn in their ration; hence, should be our best animals to determine the point in question.

**COMPARISONS:** At Wooster W17 was the hybrid used in comparison with Clarage. At the Madison County Experiment Farm, U.S.52 was compared with Clarage, and at the Miami County Experiment Farm, Iowa 939 was compared with Woodburn. In each of these three tests the same supplement was used.

In two of these tests the fastest and most efficient gains were made by the pigs fed the open-pollinated corns. In the Madison County test the hybrid corn-fed pigs outgained their opponents and did it with a little less feed. At the end of the first year of our work the open-pollinated corns were a little ahead of hybrid corns in feed lot performance but the problem could not be called settled.

We wanted and needed more evidence, so in the fall of 1938 we used five of the popular hybrids, each of which was grown on a farm in comparison with an open-pollinated corn.

K35 and Woodburn were used by D. S. Bell in a test with fattening lambs. This test showed some advantages for the hybrid-corn-fed lambs and some advantages for the other lot, so we would need say "no marked difference," maybe a shade to the open-pollinated corn.

K23 and Clarage were the corns used in a test with pigs at London. The gains of these two lots of pigs were identical though it took a little more of the hybrid corn to make a hundred pounds of gain.

W17 and another selection of Clarage were compared, fed to pigs at the Paulding County Experiment Farm, where the hybrid-corn-fed pigs made a little faster gains but took a little more feed to make the gains.

Iowa 939 and Woodburn were fed to pigs at Wooster. Here the hybrid-corn-fed pigs finished a shade to the good in both gains and efficiency.

At the Miami County Experiment Farm, U.S.52 and Golden Surprise were compared. The open-pollinated-corn-fed pigs led in gains and efficiency.

W. L. Robison, who had charge of the pig feeding tests, summarized the three comparisons of 1937-1938 and the four comparisons of 1938-1939.

**THE AVERAGES** showed hybrid corn to be 3 per cent less efficient for pigs than the open-pollinated corns with which the hybrids were compared.

Mr. Robison took the four hybrid corns and the four open-pollinated corns that were used in the second year's pig feeding work, put each in a separate compartment of self-feeders, and let the pigs decide which they liked best. The location of each corn in the feeders was shifted each week so the pigs could not eat more of one than another if they happened to have the habit of eating at certain places at the feeders. The pigs showed a noticeable preference

for one of the selections of Clarage. When the supply of this Clarage was exhausted their appetites led them to the feeders containing K23, W17, U.S.52, and other selections of Clarage, Iowa 939, Golden Surprise, and Woodburn, in the order listed.

Moisture determinations were made of the corns. It was very noticeable that the pigs preferred the corns that carried the least amount of moisture. It is, we think, correct to say that the moisture content of corn is an indication of its maturity and that this in turn indicates palatability and perhaps feeding quality.

As stated before, hogs consume the largest portion of corn to other feeds of the different classes of livestock. Fattening cattle, particularly calves, are second in corn consumption in proportion to roughage.

**FATTENING STEER CALVES:** During the 1938-1939 feeding season, we conducted a comparison of hybrid and open-pollinated corns for fattening steer calves. We used the same corns, both hybrid and open-pollinated, that were used for the test with pigs.

We did not, however, have facilities for using each of the four hybrids and each of the four open-pollinated corns separately. The thing we did was to mix the four hybrids together in equal parts for one lot of calves and the four open-pollinated corns in equal parts for another lot of calves.

Three hundred and fifty-pound steer calves were used in the test, twenty head per lot, for a period of ten months. Remember that the corn was fed to the steers as shelled corn. The same amount of corn, supplement, silage, and hay was fed to each lot of calves. When the test closed we had an average daily gain of 1.91 pounds per day for the calves fed the open-pollinated corns and 1.97 pounds per day for the group fed the hybrid corns. This was a difference of three per cent in favor of the hybrid corn. Inasmuch as we fed the same amount of corn to each group, the amount of corn necessary to produce the gains was about 3 per cent less when the hybrid corn was used. We saw no difference in the palatability of the corns as fed to the steer calves.

**CORN-AND-COB MEAL** rather than shelled corn is fed by a great many cattle feeders. Where this is done, a proportion of grain to cob we think would be a factor. It is known that variation exists between corns, both hybrid and open-pollinated, in this respect. A comparison of corn-and-cob meals made from different corns would doubtless need to take shelling percentage into consideration. Corn-and-cob meal feeders should remember this point and feed their corn-and-cob meal on the basis of its corn content.

There has been some inquiry and considerable discussion relative to the hardness of some of the hybrid corns. It is true that there is considerable variation in the hardness of corns, both hybrid and open-pollinated. Our experiments were not set up with this point in mind, though the different corns were checked for relative amounts of horny starch and floury starch, and considerable variation was found. Our results with pigs showed that in 5 of the 7 tests the pigs ate more of the corns that showed the smaller percentage of starchy kernels, the harder corns.

The Iowa Experiment Station has done considerable work comparing shelled corns of different degrees of hardness for fattening pigs, and they have found no significant differences in chemical composition, palatability, rapidity or efficiency of producing gains.

The Indiana and Nebraska Experiment Stations have compared hybrid and open-pollinated corns for pigs. In the Indiana tests the pigs fed the open-pollinated corns were a shade to the good in gains. In Nebraska the reverse was true.

It is obviously impossible to test all the various hybrids and open-pollinated corns for their feeding value. From the information that we have from our tests and those conducted at

other experiment stations, we believe that the shelled corn of the adapted hybrids is comparable in feeding value to the open-pollinated corns.

Our work indicates also that corns low in moisture content are more palatable to pigs than corns high in moisture. Since we believe that moisture content is associated with maturity, we suggest that in selecting a corn to grow in 1940, due consideration be given to obtaining a corn that will mature as well as give a good yield.

Men who feed their corn as corn-and-cob meal should give consideration to the shelling percentage and should feed the corn-and-cob meal on the basis of its grain content.

**Flour Mills** ground 327,044,077 bus. of wheat during the 8 months prior to Mar. 1, against 322,402,063 bus. for the like period of 1938-39, as reported by the Bureau of the Census.

## Superintendents Meet in Toronto

[Continued from page 296]

they were served luncheon. Ladies present included: Mesdames J. Belanger, Fort William; J. R. Coughlin, Minneapolis; Dean M. Clark, Chicago; E. E. Fraenheim, Jr., Buffalo; N. E. Heels, Owen Sound; J. R. Gibson, Fort William; P. M. Muir, Weston; R. Hetherington, Fort William; L. C. Irwin, Fort William; S. C. Klaus, Chicago; F. M. Losie, Minneapolis; James Mackenzie, Three Rivers; Frank J. McLean, Port Arthur; R. C. Macnabb, St. Louis; G. S. McPhee, Winnipeg; E. I. Odell, Kansas City; O. W. Olsen, Duluth; P. C. Poulton, Fort William; R. B. Pow, Fort William; Henry Richardson, Clifton, N. J.; Fred A. Sibbald, Fort William; Walter H. Teppen, Duluth; H. C. Brand, Cedar Rapids, and Miss P. A. Sibbald, Fort William.

## Your Air Compressor Hazards

[Concluded from page 292]

compressor should be sufficiently large to care for peak load conditions without operating for such long periods as to cause overheating. If the compressor is too small for its requirements, there will be a tendency to operate at too frequent intervals and longer periods than it was built to stand, with the result that it will become overheated and may cause a fire or tank explosion. Where air pressures higher than 80 pounds are involved, compressor shall be of the two stage design in order that air temperatures be limited to safe value below the ignition temperature of lubricating oil.

**UNLOADER:** If the compressor is to be driven from a line shaft or by an engine, at least a hand operated unloader should be provided. This device exhausts the back pressure in the line to the air tank, thereby enabling the compressor to start easily. If the compressor must start against this back pressure, the possibility of belt slippage is introduced. The unloader should preferably be of a type which unseats the suction valve of the compressor when the maximum safe tank pressure has been reached, thereby providing an added factor of safety.

**CONTROL SWITCH:** If the compressor is to be operated by an electric motor, the control switch should be of a type which provides, overload and low voltage protection for the motor.

Automatic starting and stopping of the motor regulated by the tank pressure.

Automatic unloading (equally satisfactory) would be an individual motor control switch equipped with suitable overload and low voltage protective devices and a separate switch incorporating the automatic starting, stopping and unloading features.

Wiring should be according to the Regulation of the Mill and Elevator Mutual Fire Insurance Companies.



# Grain and Feed Trade News

Reports of new elevators, feed mills, improvements; changes in firms; fires, casualties, accidents and deaths are solicited.

## ARKANSAS

Helena, Ark.—Fire believed to have originated from a defective flue Mar. 7 destroyed the County gristmill.

Stuttgart, Ark.—The majority of the rice mills are working 42 hours a week, according to a recent survey. These mills process most of the rice grown in the Grand Prairie rice belt of Arkansas and Lonoke Counties. One mill manager said operation has been continued despite spotty sales, tho not with great volume, since prices in the rice market were not stable. Extra fancy Blue Rose rice, top grade of local rice, ranged from \$2.85 to \$3 per bushel.—J. H. G

## CALIFORNIA

Santa Rosa, Cal.—The Todd Feed Co. store has been sold to the Taylor Milling Corp. of Los Angeles.

San Francisco, Cal.—New members enrolled by the California Hay, Grain & Feed Dealers Ass'n include the Plant Food Corp., Los Angeles; Vita-Balanced Mfg. & Supply Co., Van Nuys; E. B. Dickerman, Ontario; Monarch Feed & Supply Co., Tulare; LeRoy Titherington Trucking, Tulare; Gunter Bros., Morgan Hill; A. R. Culver & Son, Soledad.—I. J. Stromnes, sec'y.

Oxnard, Cal.—The Oxnard Grain Exchange has been organized with headquarters at the offices of the Searl-Merrick Co. Officers elected are Joseph Powers, pres.; Jack Sweetland, vice-pres.; Harry M. Holt, recording sec'y; Ernie Pate financial sec'y; Arnold Poppic, treas. The board of directors consists of Ralph Churchill, Arnold Poppic, Jack Sweetland, Carlos Levy, Ernie Pate, Harry M. Holt, Joseph Leavens, and Joseph Powers. Thru the co-operation of Searl-Merrick, those interested will be able to get daily stock and commodity market returns.

Los Angeles, Cal.—The California Hay, Grain & Feed Dealers Ass'n will hold its "Sweet '16" convention on Apr. 18, 19 and 20 at the Biltmore Hotel. Special rail rates have been arranged for all members of the Wholesale Feed, Alfalfa Meal, Hay, Grain, Retail Feed, Concentrate and Seed Trade. R. A. Mayer is general convention chairman and Norman Springer in charge of entertainment and finance; E. R. Bailey is in charge of the golf tournament at the Wilshire Country Club the afternoon of the 18th. The annual banquet and dinner dance will be held in the Biltmore Bowl the evening of Apr. 19. J. B. Claypool is state president.

## CANADA

Fort William, Ont.—Thomas (Jock) Simpson, 64, died Apr. 1 in the local hospital after a lengthy illness. Until forced to retire because of ill health, he was foreman for the Manitoba Pool elevators here. Previously he had been employed on the Davidson-Smith elevator staff.

Fort William, Ont.—Frank H. Hall, international vice-pres. of the Brotherhood of Railway Clerks, Freight Handlers, Express and Station Employees, recently left for Winnipeg to pave the way for forthcoming negotiations between local 650 of grain elevator workers at the lakehead and the elevator companies.

Winnipeg, Man.—G. Alexander Lawrence, 47, manager of the commission department of the Federal Grain Co., and former president of the Northwest Grain Dealers Ass'n, died here recently. He had been in the grain business since 1912, having been employed by the State Elvtr. Co. and the Union Grain Co. prior to joining the Federal Grain Co.

## COLORADO

Amherst, Colo.—The Amherst Farmers Co-op. Elvtr. Co. recently built a feed warehouse.

Kersey, Colo.—Thomas L. Schank has provided lightning protection for his elevator.

Severance, Colo.—The Severance Elvtr. Co. has provided lightning protection for its elevator.

Willard, Colo.—H. M. Welsh has provided lightning protection for his concrete elevator and plant.

Longmont, Colo.—Gordon Jones, who has been manager of the Johnstown Elevator, subsidiary of the Colorado Milling & Elvtr. Co., has been appointed manager of the Longmont Flour Mills, succeeding W. D. Kistler who has been made manager of the Hungarian Mills in Denver.

Denver, Colo.—W. D. Kistler has taken over active management of the Hungarian Flour Mills, succeeding W. B. Johnson who recently resigned his position with that company. Mr. Kistler was manager of the Longmont Flour Mills, Longmont, Colo., for some time, which mill also is a branch of the Colorado Milling & Elvtr. Co.

## ILLINOIS

Murdock, Ill.—A new roof covers the office of the Murdock Grain Co.

Sycamore, Ill.—S. A. Holcomb, president of Holcomb-Dutton Lumber Co., passed away last week.

East Moline, Ill.—Burglars broke into the office of the Independent Feed Co., the night of Mar. 23. The cash drawer, taken, contained no money.

Polo, Ill.—Orlando J. Donaldson, 78, operator of a hay, grain and feed business here from 1902 to 1917, died Mar. 26 of a heart attack, at his son's home in Rockford.

Villa Grove, Ill.—John Spelbring, formerly employed in the office of the Tuscola Co-operative Grain Co. in Tuscola, is new manager of the Villa Grove Farmers Elvtr. Co. elevator.

Morris, Ill.—Around 700 persons were guests of the Farmers Square Deal Grain Co. in the Morris theatre at its annual party the afternoon of Mar. 26. The annual meeting followed the theatre performance.

Hahnman (Deer Grove p. o.), Ill.—Vincent E. Egan, manager of the S. C. Bartlett Co. elevator, and Miss Wilma Ann Doran of Ohio were married Mar. 25, and left at once on an extended honeymoon trip.

Antioch, Ill.—The Antioch Milling Co. mill burned the night of Apr. 5, the four-story building containing live stock feed estimated at a \$50,000 loss. The fire broke out again two hours after it was thought to have been extinguished and spread to the front offices before being brot under control.

New Athens, Ill.—The White Dove Mills, Inc., on Mar. 17 filed a petition in the Belleville Circuit Court denying it owed the State Bank of Athens \$7,000. The bank on Feb. 10, filed a petition in the same court asking a receivership for the mill, contending it had defaulted on a \$7,000 note.—P. J. P.

Mason City, Ill.—The Farmers Grain & Coal Co. held its annual meeting recently at Odd Fellows Hall which was followed by a chicken dinner served 350 of its patrons and their wives at the Presbyterian and Methodist churches. The company began holding these annual dinners thirty years ago.

Henry, Ill.—Contract for erection of the river elevator here for W. W. Dewey & Sons has been awarded to the R. R. Mayberry Co. The new house will have a 47,000-bu. capacity and will be fitted with a marine leg capable of handling 6,000 bus. of grain an hour. The house will be 39x32 ft. and 98 ft. high.

Woodhull, Ill.—A new cupola is being built at the Woodhull Grain Elvtr. Co.'s elevator. It will be approximately 14 ft. higher than the one formerly in use, giving a greater slope for the flow of grain when loading railroad cars and also will improve the operation of the automatic grain weighing equipment.

Warsaw, Ill.—Shirley E. Sharp, operator of the Sharp Elvtr. Co. in Alexandria, has made application with the U. S. Engineers at Rock Island, Ill., for a federal permit to construct a grain elevator and bulkhead for river shipping at the foot of Pearl St. The elevator will be built on a foundation of wood piling.

Belleville, Ill.—Don Foster, sec'y-treas. of the Chamber of Commerce, has been in contact with soybean processing interests, who have asked that the attitude of farmers towards soybean production here be learned. The first definite move towards the establishment of soybeans not only as a farm crop in St. Clair County, but as the possible raw material for a processing plant here was taken at a meeting held Mar. 26.

Springfield, Ill.—A hearing on preliminary motions in a suit by truckers to test the new Illinois truck regulatory act was deferred Apr. 3 in Sangamon County circuit court until Apr. 11. The plaintiffs contend the law, setting up safety and financial responsibility requirements for truckers, is unconstitutional because it exceeded the scope of activity denoted by the title and because it attempted to regulate the trucking business.

Fogarty Siding (Broadwell p. o.), Ill.—Jesse Eury has bot the two-thirds interest of J. S. Sparks and Edward Warrick in the Fogarty Grain Co. elevator, becoming sole owner of the property. The transfer includes the elevator building, scales, office, motors, cribs, etc., on the site leased here from the I. T. S., and also the dwelling house west of the elevator. Sparks and Warrick reserved their individual two-thirds interest in grain in the elevator to be delivered in accordance with contracts made before the ownership change.

Peoria, Ill.—A resolution asking for bean inspection to be placed under the same regulation and personnel as grain, subject to the United States Grain Standards Act was adopted Apr. 3 by directors of the Peoria Board of Trade and copies of the same mailed to Illinois senators and representatives for their consideration. Soybean inspection here during the last 12 years has been under the Seed, Feed & Hay Division of the Bureau of Agricultural Economics, U. S. Dept. of Agri. The method of handling appeals, which is to have the original inspector draw a sample and forward it to Chicago, entails loss of time and, the Board held, is not an independent appeal, neither is it efficient, and causes delays that are expensive to producer, handler and processor. The Board pointed out in its resolution that outside markets, such as Decatur, Ill., have a bean inspection system which appears to be satisfactory to country shippers and is more economical.

## CHICAGO NOTES

John H. Wheeler, 63, a member of the Board of Trade for 38 years, died Apr. 2 at his home in Evanston. He had been associated for the last two years with Cargill, Inc.

The following have been admitted to membership in the Board of Trade during March: Walter A. Scoville, Jr., Ann Arbor, Mich.; Joseph M. Vercoe, Vercoe & Co., Columbus, O.; Earl C. Thomas, Russell-Miller Milling Co., Chicago; Lewis S. Brucker, Shelby, O.; James Walter Duncan, Jr., Evansville, Ind.; Augustus Van L. Brokaw, Friedman, Brokaw & Samuel, St. Louis, Mo.; Morris Sprayregen, Elsie, King & Studdiford, New York, N. Y.; Nobel E. Davis, with Fenner & Beane, Chicago. The following memberships were transferred: Ralph H. Neely; John H. Cragin; Alonzo E. Bush; Richard M. Westbrook; Alexander D. R. Collier; James G. Hodgkinson; Frank E. Alstrin, Bertram W. Frank; Estate of Adolph Kempner; Frank J. Garneau.

A suit charging that negligence of Rosenbaum Bros. was responsible for the \$4,000,000 elevator fire last May 11 that caused the lives of nine men was filed in Circuit Court Apr. 5. The plaintiff is the Chicago Board of



Trade, which asks the grain firm be held liable for compensation awards of \$4,800 due the family of Ernest H. Lindgren, a Board of Trade grain weigher killed in the fire. A dust explosion was held to be the cause of the fire and the grain company is charged with negligence in allowing grain dust to accumulate and also to have failed to provide proper fire prevention equipment in the suit. The fire destroyed three Rosenbaum elevators and two owned by the Norris Grain Co. The suit is really between the two accident insurance companies of plaintiff and defendant, whose names are used.

## INDIANA

Dora (Wabash p. o.), Ind.—Merritt Heslit has opened a grist mill and feed store here.

Albany, Ind.—Max Zeigler of Muncie is looking for a location for a soybean mill here.

Nappanee, Ind.—Nappanee Milling Co. has installed a 1-ton vertical Sidney Kwik-Mix Feed Mixer.

Winchester, Ind.—Goodrich Bros. Co. installed a Kelly Duplex Vertical Feed Mixer, ton capacity.

North Salem, Ind.—A new 1-ton mixer and corn sheller has been installed at the Busenbark Grain Co. elevator.

Bryant, Ind.—The Geneva Milling & Grain Co. installed a new feed mixer, making two operating in its plant.—A. E. L.

Geneva, Ind.—The Geneva Equity Exchange will install a new feed mixer and make other changes in its feed mill.—A. E. L.

Lowell, Ind.—William Z. Sisson has built a new feed floor in his plant and installed a ton Kelley Feed Mixer floor level feed.

Deedsville, Ind.—Fire started by lightning early Apr. 2 spread to the feed mill of See & Sons, destroying the plant.—A. E. L.

Barnard (Roachdale R. R. 2), Ind.—A 1-ton mixer has been installed at the Busenbark Grain Co. elevator and the scale has been rebuilt.

New Market, Ind.—The Busenbark Grain Co. has installed a new motor direct connected to its hammermill and a 1½-ton batch mixer at its local elevator.

New Richmond, Ind.—New Richmond Lumber & Coal Co. has installed a Blue Streak Hammer Mill with built-in magnetic separator, direct connected to electric motor.

Mt. Vernon, Ind.—The Fuhrer Ford Milling Co. has announced the construction of additional concrete grain storage tanks. Work will be done by the Reliance Const. Co.—H. H. H.

New Carlisle, Ind.—New Carlisle Roller Mills, managed by Carl Zahl, has installed a Supreme Hammer Mill with 30-h.p. Lima Motor direct connected to it, and a crusher feeder over it.

Kendallville, Ind.—The Noble County Farm Buro Co-op. Ass'n is building a feed mill to be operated in connection with the local elevator. Chris Wickey will install the machinery.—A. E. L.

Buckeye (Warren R. F. D.), Ind.—Ralph Perry has succeeded W. A. Coolman as manager of the Warren Equity Exchange local branch. Mr. Coolman died last December.—A. E. L.

Schnellville, Ind.—The damage caused at the Schnellville Flour Mills by wind and hail during a recent storm has been repaired and the plant, operated by Frank Haas, is in full operation.—H. H. H.

Plymouth, Ind.—C. W. Sparks, formerly in charge of the wholesale division of Syler & Syler, resigned Apr. 1 with the intention of engaging in the elevator business on his own account in the near future.

Fortville, Ind.—George O. Rafert, engaged in the grain and elevator business and residing on a farm near here, will ask the Republican nomination for Lieutenant-Governor at the forthcoming Republican state convention.

Peru, Ind.—The Peru Grain & Coal Co. has enlarged its office and opened a larger sales room where their stock of merchandise is nicely displayed. David Jackley, manager, reports a nice increase in business since the change.

Williamsport, Ind.—M. C. Robertson of the Robertson Grain Co. has painted the floors of his show room and covered the walkways with rubber matting. A cement floor, also, will be laid in the new farm machinery storage room.

Yeoman, Ind.—The W. C. Smock Co. has modernized its office and display room, making possible an attractive display of its stock. W. C. Smock, manager, reports a noticeable increase in business on the smaller items following completion of the improvements.

Goshen, Ind.—Elkhart County Farm Buro, managed by E. S. Smoker, has installed a hammer mill with magnetic separator, and variable speed drag line feeder. The mill is run by a 60-h.p. Fairbanks-Morse Motor housed in a separate, asbestos protected power house.

Jasper, Ind.—Leopold Stemle, 71, who has been engaged in the milling and grain business in southern Indiana for the past 40 years, died Mar. 28. For the last 20 years he had been a partner in the Victoria Mill & Elvtr. Co. here and prior to that operated a mill at Birdseye, Ind.—H. H. H.

Evansville, Ind.—Charles Nunn & Sons Milling Co. will complete their expansion program May 1. A new diesel power and light plant has been installed; a new three-story storage building and modern offices built, and modern machinery is being added. The company will double its former output of flour, producing 300 bbls. daily.

Evansville, Ind.—On Mar. 28 the Diamond Mills operated by John Jennings, State WPA director, sustained a small fire loss. A 60-ft. metal smokestack was destroyed and two small fires started when a truck backed into a guy wire attached to the stack. The stack fell against a high tension electric wire, which was pulled into a cob pile. Fire was started in the cob pile and also in the plant.—H. H. H.

Frankton, Ind.—Miles Gooding, manager of the Farmers Grain & Coal Co., entertained close to 1,000 persons at his annual chicken dinner recently when an excellent program of entertainment was presented of which the "colored family" was the highlight. These annual affairs of Mr. Gooding's are unique in that the chickens served are those he has raised on experimental tests, and the quality of the repast is attested to by the ever increasing number of guests each successive year records.

Rolling Prairie, Ind.—The Rolling Prairie Lumber & Grain Co., enjoying an expansion of its business under the energetic management of H. C. Wolcott, is installing a Whirlbeater Hammer Mill, with magnetic separator and direct-connected 50-h.p. totally inclosed, fan-cooled motor. The company just completed installing a Sidney Scalping Reel over its corn cleaner to solve the shuck problem that has arisen with hybrid corn and mechanical corn pickers, and has enlarged the down spout for cobs at the elevator from 10 inches to 12 inches.

Waveland, Ind.—The Busenbark Grain Co. has rebuilt its local elevator and installed new machinery, included being a 1-ton mixer, V 8 power unit; 1½-ton truck; and clover seed cleaner. Telland Gooding is manager of the plant.

New Haven, Ind.—The Ben Levy Grain Co. held its annual evening party for its customers on Mar. 14, and in spite of the icy condition of streets and highways, over 500 persons were present to enjoy a program of entertainment arranged for the occasion.

## IOWA

Elkader, Ia.—The Clayton County Farm Service Co. has been incorporated.

Onawa, Ia.—The new modern mill of the Northwestern Milling Co. started operations Apr. 5.

Woden, Ia.—The Farmers Elvtr. Co. elevator was broken into the night of Apr. 1 and \$100 in cash stolen.

Ellsworth, Ia.—Roland Bauman, formerly of Hubbard, is new manager of the Ellsworth Co-operative Elevator.

Marshalltown, Ia.—The Kessler Grain Co. has opened a downtown store with a complete line of feeds and seeds.—A. G. T.

Rose Hill, Ia.—The Rose Hill Elvtr. Co. is installing a new 30-ton scale. Hugh Moore is manager.—"Art" Torkelson, with Lamson Bros. & Co.

Sloan, Ia.—Adam Pratt has purchased the elevators owned by B. M. Stoddard. Mr. Pratt had been operating them under lease as the Pratt Grain Co.

Marble Rock, Ia.—Cliff Ritter was elected manager of the Farmers Co-operative Elvtr. Co. elevator recently. Mayne Spaulding is assistant manager.

Batavia, Ia.—The Batavia Elvtr. Co. sponsored a Honeymead Products show on Apr. 1 for farmers and friends. Prizes were awarded and lunch was served.

Alleman, Ia.—During the year 1939, \$10,000 was realized thru the Farmers Co-operative Elvtr. Co., which will be returned to the patrons by dividends.—L. A. G.

Wellsburg, Ia.—Harm J. Frerichs of Frerichs & Snittger passed away Mar. 21, aged 52 years. He had been ill of double pneumonia in a Marshalltown, Ia., hospital.

Holmes, Ia.—The Farmers Elvtr. Co. elevator was broken into early the morning of Apr. 4. The thieves pried the door off the safe but failed to obtain any money.

Hanlontown, Ia.—The Farmers Elvtr. Co. entertained 500 persons at an oyster supper and program of entertainment Mar. 29. Samuel B. Swartz is manager of the elevator.

Marshalltown, Ia.—Bob Kopel, manager of Kopel Grain & Coal Co., was operated upon Mar. 25 for appendicitis. He is rapidly recovering.—"Art" Torkelson, with Lamson Bros. & Co.

Laurel, Ia.—D. H. Paul was re-elected president of the local Farmers Co-op. Elvtr. Co. John Fehrman is vice-pres., Henry Sietmann, sec'y, and Fred West is treas.—Art Torkelson.

Malcom, Ia.—The Farmers Elvtr. Co. entertained the farmers of the community and their wives at a free movie the afternoon of Mar. 30, followed by refreshments and distribution of prizes.

Ryan, Ia.—Reuben Anderson of Bernard will succeed P. A. Dickinson as manager of the St. Anthony & Dakota Elvtr. Co. Mr. Dickinson recently resigned to accept a similar position with an elevator at Traer.

Boone, Ia.—Mrs. Charles Douglas, 71, died here Mar. 28. Her son, Leand Douglas, and husband are associated with E. W. Bailey & Co., the latter at Cedar Rapids, Ia. Interment was at Marseilles, Ill.

Luther, Ia.—The stockholders of the Farmers Co-operative Elvtr. Co. recently held a re-organization meeting in the parlors of the Methodist church. Dinner was served and the afternoon devoted to discussion.—L. A. G.

Lamoni, Ia.—The Hyde & Vredenburg Co. have their new mill almost ready to operate. The plant replaces the one that burned some weeks ago. They have been grinding some products there for the past few weeks. Modern machinery has been installed thruout the mill.

## CHICAGO RIVER ELEVATOR For Sale or Lease

750,000 bus. all up elevator located on the south branch of the Chicago River and served by the C.&A.R.R. close in, is available for sale or lease on a very attractive basis.

This plant, of timber construction with cribbed bins, is in first class operating condition, and its all up design affords economical mixing. It is located on 55,000 sq. ft. of property with approximately 600 ft. of dock frontage.

The property is operated under lease and possession will be available July 1st, 1940.

For information address

84 Grain & Feed Journals, Chicago



George, Ia.—Fire of unknown cause destroyed the Farmers Grain Co. elevator and office here Apr. 3. There were 12,000 bus. of grain in the plant. It was estimated as \$20,000 loss, partly covered by insurance.—“Art” Torkelson.

Bigelow, Ia.—R. L. Paradis of Minneapolis was guest speaker at the annual meeting of the Farmers Elvtr. Co. The annual report showed a gross profit of \$12,621; operating expenses, \$7,804; net income, \$6,327.—L. A. G.

Cedar Rapids, Ia.—S. W. Wilder, head of the Wilder Grain Co., has been chosen as member of the executive com'te of the Grain & Feed Dealers National Ass'n to succeed the late Otto F. Bast. Mr. Wilder is a past president of the Ass'n.

Alta, Ia.—At the annual meeting of the Farmers Elvtr. & Supply Co. officers were elected and directors named. During the past year the elevator has handled 400,000 bus. of grain with sales of merchandise amounting to \$218,000.—L. A. G.

Hubbard, Ia.—Herb Neubauer has accepted a position in the Farmers Co-operative Elvtr. Co. elevator, succeeding Roland Bauman who recently went to Elsworth, Ia., to act as manager of the Ellsworth Co-operative Co. elevator.—L. A. G.

Morrison, Ia.—The Farmers Elvtr. Co. has been re-organized; capital, \$30,000, par value of stock, \$100 per share. H. R. Stock, who has been manager of the elevator for the last 20 years, remains in that capacity with the new company.

Klemme, Ia.—The Klemme Co-operative Grain Co. voted to reorganize at a recent meeting of stockholders, directors and officers. A new co-operative system will be followed in the future it was announced, the membership to be divided into two divisions, producers and non-producers.

Dumont, Ia.—Between 500 and 600 persons visited the Farmers Grain Co. recently, to enjoy a program of refreshments and entertainment arranged for the occasion. Coffee and doughnuts were served and many prizes awarded for various guessing contests. J. R. Britcher is manager of the elevator and Lester Williams is assistant.

Iowa grain dealers are surely taking an active interest in the welfare of their communities as is evidenced by their recent election to the following important offices: Mayor: John Mehrens, Calumet; Grover Rohlk, Donahue; Wm. F. Lucke, Dennison; C. F. Darrow, Anita; C. E. Arnold, Lake Park; Albert Nelson, Malvern; Hugh Roberts, Moneta; Edw. Shearer, Riverton; Harry Grove, Farnhamville; Treasurer, H. L. Huston, Columbus Junction; Councilmen: L. Thompto, Northwood; E. Klinzman, New Sharon; J. Tjossem, Paullina; Otto Zierke, Rockwell City; V. Branstetter, Sutherland; R. A. Otto, Sidney; H. J. Esch, Strawberry Point; Merle Froning, Zeiring; W. J. Haubrick, Mapleton; H. E. Buttolph, Bennett; John Nie, Mechanicsville; Henry Schumacher, Charlotte; Paul Gadke, Stanwood; H. L. Moorhead, West Branch; Carl Mohl, Lost Nation; Fred Van Esen, Toronto; Vernon Badrick, Preston; Hugo Lensch, New Liberty; Ben Paustian, Walcott; H. L. Fitch, Dennison; E. Burke, Anita; K. Brandt, Allison; Paul Vetter, Lake Park; Chas. Russell, Lynnvill; W. N. LeGrand, Monroe; G. Mellenger, Nashua.—A. G. T.

## KANSAS

Padonia, Kan.—The Continental Grain Co. is now operating the Browning Elevator under lease.

Colby, Kan.—The Thomas County Co-op. Ass'n will build a feed mill addition to its elevator.

Duquoin, Kan.—The Farmers Co-op. Elvtr. & Merc. Co. recently built a coal shed near its elevator.

Lincoln, Kan.—High winds in March damaged the Robinson Elvtr. Co. elevator. The loss was small.

Patterson, Kan.—The N. Sauer Milling Co. reported a small loss resulting from high winds on Mar. 27.

Anson, Kan.—The Stayton & Myers Grain Co. sustained a small loss at its plant from high winds in March.

Eudora, Kan.—High winds on Mar. 28 did a small amount of damage at the Eudora Mills, owned by J. D. Adams.

St. John, Kan.—The Midwest Grain Co., E. J. Hahn, manager, is building a machinery warehouse near its elevator.

Haddam, Kan.—The Haddam Grain & Feed Co. recently completed its warehouse which has been equipped with a feed mixer.

Fontana, Kan.—The local elevator owned by Mrs. Ida Hope of Parker, Kan., has been sold to the Blake Lumber & Grain Co., who has been operating it under lease.

Sylvia, Kan.—The feed mill of the Midwest Grain Co. was destroyed by fire Mar. 29. It is believed defective wiring started the blaze according to Sec'y-Treas. A. W. Estes.

Canton, Kan.—Overheated salamanders recently set fire to some form lumber in the Farmers Grain & Supply Co. elevator under construction by Chalmers & Borton. The loss was small.

Wellington, Kan.—Storage space for 275,000 more bus. of wheat will be provided in an addition to be built to the Hunter Mill elevators at the A plant. C. W. Hunter stated the work of construction will be started soon.

Glen Elder, Kan.—The Bailey & Lynch Grain Elevator will embark on a remodeling and building program that includes remodeling the east elevator and building a large warehouse for the grinding, mixing and seed cleaning units. Paul Bailey is manager of the elevator.

Moscow, Kan.—L. E. Green, manager of the Security Elvtr. Co., recently underwent an operation at Epworth Hospital, Liberal, Kan., for the amputation of two of his fingers, injured in an automobile accident last July. The operation was made necessary when the wound did not heal.

Haven, Kan.—The Farmers Co-operative Grain Co. voted to build a 100,000-bu. storage elevator at a special meeting held Mar. 20. The board of directors was given complete charge of selecting a site for the structure and making all arrangements for financing the project. Work will start at once and it is planned to have the elevator completed by harvest.

Salina, Kan.—The Salina Board of Trade has an active com'te working on convention arrangements for the entertainment of the 43rd annual gathering of the Kansas Grain, Feed & Seed Dealers Ass'n, to be held here May 21 and 22. The Ass'n sec'y and board of directors are busy planning a program for the meeting which will be both instructive and interesting, and a large attendance is anticipated.

Copeland, Kan.—The Copeland Co-operative Elevator, 500,000-bu. capacity, built in 1929 by 118 farmers at the cost of more than \$150,000, when wheat brot \$1 a bushel, has been sold at auction by the U. S. government. Two years ago the government leased it to George and Jesse Riffe of Texhoma. The brothers made a small profit and when their lease expired they offered \$50,150 at auction. The bid was accepted.

Smith Center, Kan.—The old Reamsville windmill, a landmark for many years in northern Smith County, has been removed to a site in the local city park, and repaired and refurbished. It exemplifies one of the many old-world ideas brot to America by the many men and women who helped build Kansas, Nebraska and other states. A pair of burrs it contained were cut out of native stone and sharpened by hand with a small iron pick.

Larned, Kan.—The Pawnee County Co-operative Ass'n let the contract for construction of its 100,000-bu. concrete elevator to Chalmers & Burton. Building operations started Mar. 25 and the structure is to be completed by June 15. The elevator will include four tanks with a capacity of approximately 15,000 bus. each and 11 smaller tanks of capacities ranging from 1,000 to 5,000 bus. The four larger tanks will be approximately 110 ft. high, topped with a 20-ft. head house. There will be bins between the tanks and a driveway provided thru the middle. An elevator leg with a 4,500-bu. per hour capacity will be installed, and a 10-bu. automatic scale. George Kelsey is the Ass'n's manager.

Cheney, Kan.—The Friesen Grain Co. reported a small loss sustained at its elevator from high winds in March.

## KENTUCKY

Danville, Ky.—Defective installation of a heating boiler was responsible for a small fire loss in the office of Anderson & Spilman recently.

Middlesboro, Ky.—Articles of incorporation have been approved for Wilson's Feed Store, capitalized at \$3,000, and incorporated by J. W. Wilson, B. F. Ausmus and Floyd Ball.—A. W. W.

Bowling Green, Ky.—The Bowling Green Milling Co. was sued for \$2,272 by O'Dell H. De-weese who charged violation of the Federal Wage-Hour Law. The suit asks double the amount allegedly received, including overtime, plus \$568 for attorney's fees.—A. W. W.

Hawesville, Ky.—The Hawesville Milling Co. is successor to the Davies Feed Mill built in 1931 by T. H. Davies and operated by him and his son Claude until last fall when Mr. Davies sold his interest. The new owners are Claude Davies and Ivory Glover who have improved and enlarged the plant and are milling flour and feeds and doing custom grinding.

## MARYLAND

Gaithersburg, Md.—Bowman Bros. sustained a small loss at their plant from a fire in the engine room on Mar. 25. The blaze was extinguished by employees.

## MICHIGAN

North Adams, Mich.—The Williams Feed Mill has installed a new corn sheller.

Bennington, Mich.—Hagan Grain Co. is installing a grain and bean cleaner.

Bridgewater, Mich.—E. G. Mann & Sons have installed a new 1-ton vertical feed mixer.

Owosso, Mich.—The Brick Elevator, operated by Fred Cornair, is installing an oat huller.

Adrian, Mich.—Cutler-Dickerson Co.'s elevator and feed mill recently was equipped with a Sprout-Waldron Saw-Tooth Ear Corn Crusher.

Flowerfield, Mich.—The Knappen Milling Co. of Augusta has purchased the local elevator of Harvey & Stuart and will take possession June 1.

Saginaw, Mich.—Henry W. Carr, 76, organizer of the Saginaw Milling Co. which built the world's largest bean elevator here, died Mar. 15 at his home.

Richville, Mich.—Mechanical bean pickers are expected to be installed soon in the grain and bean elevator of Richard Hoerlein which was erected in 1938.

Elwell, Mich.—A Gustafson Seed Grain Treating Machine is being installed in the 12,000-bu. elevator of the Peoples Elvtr. Co., managed by W. W. Bronson.

Chamberlains (Marcellus p. o.), Mich.—The Knappen Milling Co. of Augusta has purchased the elevator of Harvey & Stuart and will take possession June 1.

Kingston, Mich.—Frutchey Bean Co.'s local elevator, managed by A. F. Wingert, is installing a machine for treating seed grain with mercury and copper dusts for smut.

Colon, Mich.—Reynolds Grain Co. has installed a new Supreme Hammer Mill with direct connected 50-h.p. Fairbanks-Morse Motor, a crusher-feeder, and a magnetic separator.

## SOFT WINTER WHEAT RED — WHITE — MIXED

Red is mostly Ohio

White and Mixed is mostly Michigan

TOLEDO OFFICIAL INSPECTION  
AND WEIGHTS, except some Toledo  
or Detroit Inspection, Destination  
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Owosso, Mich.—Service of the Peoples Elevtr. Co. is being extended to include treating of seed grains with protective dusts. A Gustafson Seed Treating Machine is being installed.

Lansing, Mich.—L. E. Osmer, who has been sojourning in Tucson, Ariz., for the last several weeks, is expected back on the job at the Michigan Elevator Exchange about June 1.

New Carlisle, Mich.—The Farmers Grain Co., which is managed by Ida M. Wenger, has installed a 10-ton Howe Truck Scale in the driveway of the company's 12,000-bu. elevator.

Yale, Mich.—Reconstruction and expansion of the Yale Elevtr. Co.'s office to include a large display and sales room for sideline items is a proposed summer project of Guy M. Rowell.

Albion, Mich.—Albion Elevtr. Co. has made several mechanical improvements at its elevator. Among them installation of a 5-h.p. Lima Inclosed Motor and dust-tight Cutler-Hammer Magnetic Starter.

Jackson, Mich.—J. C. O'Toole, for 10 years employed by the Michigan Bean Co. in Merrill, has accepted a position as manager of the McLaughlin-Ward & Co. elevator and will move his family here in the near future.

Ithaca, Mich.—The interior of the office of the Ithaca Roller Mills, where Roland Crawford is manager, has been refinished with insulating celotex material in an especially attractive two-toned, decorative pattern.

Deckerville, Mich.—Extensive remodeling and repairing operations are under way at the local elevator of the Michigan Bean Co., which suffered considerable damage from fire. The property is managed by Al Gorringer.

Sandusky, Mich.—The Michigan Bean Co. recently installed a Richardson Sacking Scale and a bag sewing machine. Reconstruction of its coal sheds and recovering of its 12,000-bu. grain elevator with sheet steel is planned.

Mayville, Mich.—The Old Hollenbeck elevator, located on East Main St., a landmark erected in 1880, is being razed by its present owner, Lambert Schott. Mr. Schott purchased the elevator in 1927 and discontinued the business in 1932.

Ovid, Mich.—R. E. Hyslop, operator of the Ovid Roller Mills, is recovering from bruises and injuries received in an auto accident Mar. 29, during the course of which he discovered the safety glass used in automobile windshields is strong stuff.

Pittsford, Mich.—The feed mill owned by Roy Taylor located in the Co-operative Warehouse Co. building, burned Mar. 29, in a fire of unknown origin. The building, 30 x 40 ft., one story high, contained 150 bus. of oats, 100 bus. of corn and 10 gals. of machine oil. No insurance.

Saginaw, Mich.—The Michigan Bean Shippers Ass'n, in announcing an appropriation of \$2,500 for the purpose of participating in the proposed co-ordinated program for the advertisement of Michigan farm products, became the first organization to seek improvement of markets under the provisions of the Bishop law.

Perry, Mich.—The Perry Elevator has begun the manufacture of its own "Shiawassee" brand poultry feeds. The brand incorporates spears of wheat, and ears of corn in conjunction with an attractive, colorful design. Says Mgr. S. S. Cobb, "We are concentrating for the present on poultry feeds, putting out a combination starting and growing mash, a growing mash, and an egg mash."

Lansing, Mich.—Michigan's warehouse law which became effective last fall finds condemnation and approval among Michigan elevators. Elevators that previously did an unsupervised and cautious storage business, or stored grain for farmers free, have discontinued the practice, because of the "red tape" involved. Those who handled storage as a natural part of their business, charging regular fees for this service, are glad to have the law, regardless of the "red tape," because it has relieved them of the free storage bugaboo.

Adrian, Mich.—The Adrian Grain Co. has completed and placed in full operation under the management of W. B. Brooks, its 170,000-bu. grain elevator, which has transit arrangements on three railroads and will be operated as a sub-terminal, receiving grain in both truckload and carload lots. Also practically completed is the company's 100-ton capacity feed plant in which will be manufactured "Early Profit" poultry, hog and dairy feeds. Machinery still to be installed is a molasses mixer, which will be a combination hot and cold process. An important part of the company's business is graded, fancy, clipped oats for the race horse trade. Officers of this new company are William H. Bouma, president; W. B. Brooks, vice president; John Massey, sec'y; Delbert Massey, acting sec'y and treasurer.

## MINNESOTA

Litchfield, Minn.—A recent fire caused a slight damage to the Cargill, Inc., elevator here.

Glenwood, Minn.—The Ogdahl Feed & Seed Store has just installed a new seed cleaner.

Donaldson, Minn.—Plans are under way to organize a new co-operative Farmers Union elevator here.

North Branch, Minn.—Reuben Erickson, manager of the Hilltop Feed Store, has installed a new feed mixer.

Preston, Minn.—The Spies Milling Co. has purchased a new feed mixer, one-ton capacity, which will be installed immediately.

Klester, Minn.—William Schulte, manager of the Kiester Co-operative Elevtr. Co. since last July, has resigned, effective April 1.

St. Paul, Minn.—The Capitol Flour Mills, Inc., is building an addition to its local warehouse. McKenzie-Hague Co., Inc., has the contract.

Benson, Minn.—The elevator of the Ray M. Lang Seed & Grain Co. at Barry, Minn., was burned April 5. The fire was discovered at 12:30 a. m. Local manager is W. F. Nash.

Minneapolis, Minn.—George M. Shannon, 65, salesman for the Brown Grain Co., and a popular member of the trading floor force, died Mar. 18 as the result of a ruptured appendix after a week's illness.

St. Paul, Minn.—Charles Munn, chairman of the Minneapolis Railroad & Warehouse Commission, was guest of honor at a birthday dinner here Mar. 23, the hosts being employees of his division. The epergne was a 110 lb. birthday cake, a replica of a country elevator, with conveyor and cleaning house alongside, baked in Minneapolis for the occasion.

Fulda, Minn.—The Farmers Co-operative Commission Co. has opened for business in the old Fleischmann elevator which has been completely remodeled. It will conduct a complete feed grinding service.

Minneapolis, Minn.—C. S. Gordon, grain manager for the Quaker Oats Co., Chicago, and A. T. Burzum, manager of the Farmers Elevtr. Co., Arthur, N. D., have purchased memberships in the Minneapolis Chamber of Commerce.

Gluek, Minn.—The Gluek Co-operative Elevtr. Ass'n has been organized with the following men serving as the board of directors: O. C. Schultz, chairman; Frank Rhode, sec'y; Harm Boike, treas.; and C. A. McNeil, Ed Behner and William Alley.

Duluth, Minn.—Garfield Meyer, former Duluth Board of Trade man, died Mar. 28 in San Francisco, Cal., where he had been making his home. While in Duluth he was sec'y-treasurer and assistant manager of the Duluth-Superior Milling Co. from 1909 to 1925.

Hendricks, Minn.—A dust explosion occurring in the feed mill room at the Hendricks Farmers Elevator the afternoon of Mar. 1, damaged the roof, but danger of fire was averted by the immediate use of hand extinguishers. This is the second or third time an explosion of this kind has occurred at the mill.

Annandale, Minn.—Hieno Leppa, a former Kingston man, but more recently of Minneapolis where he was a trucker for the Northwest Terminal, is the new manager of the Osborne-McMillan Elevtr. Co. elevator. Andrew Matson, who has been with the company for 43 years, while retiring as manager is remaining with the company to look after some of the business affairs.

Heron Lake, Minn.—The Farmers Elevtr. Co. will use the St. John & Son elevator it purchased recently, for storage purposes and cleaning grain, operating it only as necessity demands for the time being, at least. Later, the new purchase may be remodeled into an up-to-date feed plant. The company's own elevator will continue to operate continuously. Martin Loe is manager of the plant.

## MISSOURI

St. James, Mo.—Charles Gray recently installed a new corn chop mill.

Rocheport, Mo.—T. J. Canole, well known grain dealer and a member of the Missouri Grain, Feed & Millers Ass'n, died recently.

Mexico, Mo.—A program of important subjects has been arranged, to be discussed at the Missouri Grain, Feed & Millers Ass'n to be held here May 23.

New Florence, Mo.—J. M. Coleman, for many years connected with New Florence Milling Co., has opened a feed store here in the Masonic building.—P.J.P.

Golden City, Mo.—W. H. Bennett has resigned as manager of the Farmers Grain & Supply Co. elevator, effective Apr. 1, and will take a long and much needed rest. He had been with the company since its organization in 1917.

Fulton, Mo.—The main mill building and warehouse of the S. R. Yantis Milling Co., has been leased to the Missouri Hybrid Corn Co. who will use it as a storage and cleaning plant for its seed corn.

Higginsville, Mo.—New members recently enrolled by the Missouri Grain, Feed & Millers Ass'n include the following: Leonard Seed Co., Marshall; Blackburn Farmers Elevtr., Blackburn; Napoleon Elevtr., Napoleon; and Joe Bance, Wellington.—A. H. Meinershagen, sec'y.

Frankford, Mo.—Two negroes arrested Mar. 20 while waiting for a bus at New Florence Junction, admitted the recent robbery of the Farmers Elevtr. & Exchange Co.'s elevator. The men gave the names, Chas. W. Scott, 27, and Richard H. Morgan, 23, of Mayview, Mo. They are being held on a charge of burglary and larceny.—P. J. P.

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Advance, Mo.—The Stoddard County Milling Co.'s 175-bbl. plant was destroyed by fire of incendiary origin Apr. 1, causing a loss of close to \$75,000. The brick building was a complete loss and the adjoining steel tanks were severely damaged. Close to 25,000 bus. of grain, mostly wheat, was badly damaged. V. C. Barnett, 52, and his 24 year old son, David, both of Advance, confessed to having started the fire, and are out on bond.—P. J. P.

#### KANSAS CITY LETTER

J. F. W. Kirshe has been elected to membership in the Kansas City Board of Trade.

Walter E. Lowe, 58, former Minneapolis employee of the Washburn Crosby Co. and since 1924 superintendent of the company's elevator in Kansas City, died Mar. 21.

Walter R. Scott, sec'y and transportation commissioner of the Kansas City Board of Trade, was among the victorious candidates in the city election Apr. 2, being elected to the city council for a term of two years.

J. T. Sexton, of the Sexton Co., has developed and is placing on the market a vitamin D premix for feed manufacturers who prefer to make a dry mix. With a base of dried cereals, the dry mix is packed in 8-lb. bags ready to use.

North Kansas City, Mo.—High winds on Mar. 28 completely wrecked the garage of the Staley Milling Co. The Midland Flour Milling Co., also in North Kansas City, reported a small loss at its plant caused by high winds on the same date.

Wallace C. Bagley, long associated with the Southwestern Milling Co., now the Standard Milling Co., as a grain buyer for its local mill, and well known in the Kansas City grain trade, has formed a connection with the Percy Kent Bag Co. He will be in charge of local and nearby territory sales.

Delivery of Nos. 1, 2 and 3 soft red winter wheat on future contracts by a change in the rules of the Kansas City Board of Trade will be voted upon by members Apr. 15. The purpose is to make the future more representative of the wheat tributary to the market, to make it more liquid and offer a better hedge.

#### MONTANA

Westby, Mont.—Fire of unknown origin badly damaged the Farmers Grain & Trading Co. elevator recently. E. H. C. Strand is manager of the plant.

Hingham, Mont.—Thos. A. Brady, 65, who thirteen years ago managed a grain elevator at Hinsdale and since that time has managed elevators along the "high line" west of Havre, died at his home here Mar. 7.

#### NEBRASKA

Walthill, Neb.—The Cherney & Watson Lumber Co. recently built a corn crib.

Valentine, Neb.—The Valentine Feed Mill sustained an electrical damage loss in a motor recently.

Scottsbluff, Neb.—The Platte Valley Feed & Milling Co. has provided lightning protection for its elevator and plant.

Cozad, Neb.—Fire of unknown origin damaged the dehydrating plant of the Denver Mill Mar. 26 to the amount of several thousand dollars. About 140 tons of meal were destroyed and 6,000 sacks were burned.

Lincoln, Neb.—J. M. Hammond was re-elected president of the Lincoln Grain Exchange at its annual meeting. Directors renamed were W. T. Barstow, vice-pres. of the Board; John M. Paul, and W. S. Whitten, Sec'y-Treasurer of the Exchange.

Schuyler, Neb.—The Schuyler Milling Co. entertained 250 farmers at its feeder meeting held here Mar. 28. "Vitamins on Parade," a technicolor sound movie, was among the highlights of the meeting. Another was the screening of movies of local feeders. The meeting was the third of its kind sponsored by the mill.

Brock, Neb.—Thomas M. Buckridge, 72, one of the most prominent grain dealers and buyers in this part of the state, died Apr. 1, of pneumonia at the Clarkson Memorial Hospital in Omaha, where he had been rushed on Mar. 30 in an effort to save his life. At one time he was vice-pres. of the Southeastern Nebraska Grain Dealers Ass'n. He was manager of the Brock Grain Co. elevator here.

Plymouth, Neb.—A team of mules hitched to a load of wheat being weighed at the Farmers Co-operative Elevator Co. elevator on Mar. 18, became frightened at a passing freight train and bolted. The front wheels of the wagon caught in the frame of the open door and pulled the south wall of the office out about 13 inches. Louis Pimper narrowly escaped injury, jumping from the path of the animals as they plunged thru the door. Harry Hueske, son of the owner of the mules, was pinned between the building and wagon, but injured only slightly.

#### OMAHA LETTER

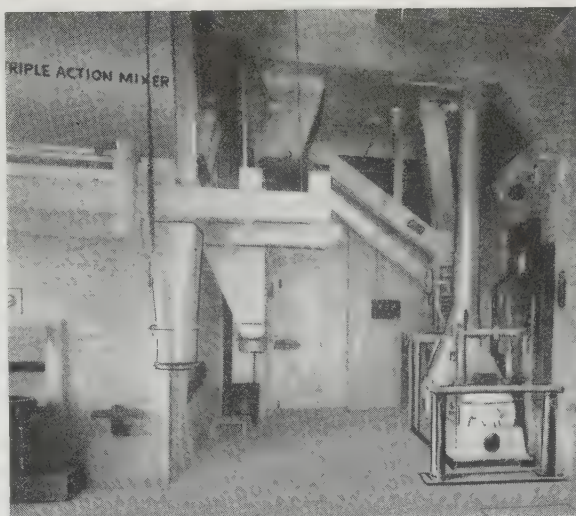
Omar, Inc., Omaha, recently moved its executive offices and laboratory into its own building at Harney St., formerly the University Club. The building has been remodeled thruout for its new owners.

Hugh A. Butler, one of the best known of the grain dealers and millers of Nebraska, is a candidate for the nomination for United States Senator on the Republican ticket. He has always been an active supporter of everything calculated to foster these industries and for

two years was president of the Grain & Feed Dealers National Ass'n. A man of highest integrity, ability and business acumen, and as a farmer and ranchman thoroly appreciative of the interests and needs of a great agricultural section, he is receiving the support of both Democrat and Republican grain men of his state.

The Omaha Dock Com'te is awaiting only a go-ahead signal from the government to start activities as soon as the ice moves out of the river. The city owns 30 acres of land on the Missouri River just north of the Smelters, the plat well served with rail lines and the east, west, north and south highways to be provided with easy and direct access to the grounds. The purpose is to provide a 1,200 ft. dock on the river front with a grain loading elevator, warehouse for package freight and open dock for steel and iron goods, and loading cranes. The initial cost of the dock and facilities, between \$300,000 and \$400,000, will be furnished by the government on long time paper and easy terms. It is expected, if favored with a normal crop this year, much of Nebraska's products will go "down river" and the boats will

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return with inbound goods to be distributed over the Omaha territory. A recent luncheon and conference held by promoters of the project was attended by delegations from other towns along the river from Sioux City to Falls City. One problem to be solved before considerable river traffic can be established is to organize barge lines to carry the goods, it was pointed out. The Inland Waterways Corp. will assist in this work and the Sioux City men are promoting a bargeline to do some of the work.

## NEW ENGLAND

Framingham, Mass.—Frank S. Eddy, 68, president of the domestic and export grain firm of C. F. & G. W. Eddy, Inc., died in St. Petersburg, Fla., Mar. 20. He was born in West Newton, Mass. He became president of his company in 1922.

## NEW YORK

Ellenburg Depot, N. Y.—The Carpenter & Adams feed warehouse was damaged by fire, started from an overheated stove, Mar. 11. The loss was small.

Buffalo, N. Y.—Ross Graves, 65, former assistant treasurer of the Buffalo Cereal Co., for many years, died Apr. 1 after an illness of several weeks.—G.E.T.

Buffalo, N. Y.—The annual meeting of the stockholders of the Corn Exchange of Buffalo was held Apr. 9, when three directors for terms of three years each were chosen, and two inspectors of election to serve at the next annual meeting.

Buffalo, N. Y.—Last year's contract terms have been renewed for about 380 Buffalo grain shovellers in 1940 thru mutual agreement of Manager Richard T. O'Brien of the Grain Handling Co. and President Coleman Perkins of the Grain Shovellers' Union, Local 109.—G.E.T.

Buffalo, N. Y.—Following the annual convention of the Superintendents Society in Toronto earlier this month, the Buffalo grain and grain processing plant superintendents held a meeting in the Statler Hotel on Friday, April 5, to discuss the highlights of the convention and post those unable to attend on the salient thoughts brought out for the benefit of all. The enthusiasm manifested indicates increased activity on the part of this chapter with strong programs planned for the coming season.

## NORTH DAKOTA

Westhope, N. D.—Anton Nestling recently purchased the International Elevator in Kuroki and has moved it to Westhope.

Carrington, N. D.—Osborne & McMillan Elvtr. Co. is tearing down the charred wreckage of its elevator, destroyed by fire Mar. 14, preparatory to rebuilding. The new elevator will have a 38,000 bu. capacity.

Manfred, N. D.—The one crib type, 27,000-bu. capacity elevator leased by the Manfred Farmers Union Elvtr. Co., was sold by the F.C.A. April 5, subject to the company's lease which expires July 31, 1940.

## OHIO

Lima, O.—The Hiram A. Holdridge Co. on Mar. 19 sustained a small loss at its plant as the result of high winds.

Springfield, O.—Fire swept thru two buildings of the Stratton Grain Co.'s mill, Mar. 26, causing damage estimated at \$8,500.

Cincinnati, O.—August Ferger, 70, prominent wholesale hay and grain dealer, died Apr. 1 at his home after a week's illness. Mr. Ferger was a native of Lawrenceburg, Ind.

Middletown, O.—The Southern Ohio Grain & Feed Dealers Ass'n held its meeting here the night of Mar. 28, when Everett Early, Lytle, presided. Ninety members were present at the Golden Lamb Hotel for the occasion.

Lucasville, O.—Fire discovered in the cob room of the Farm Buro Co-operative Ass'n Mar. 23 destroyed that structure and the office, mill, engine room, boiler rooms, storeroom and garage of that company, with a loss of many thousands of dollars. Officials began an investigation at once to determine whether the blaze was of incendiary origin.

Chillicothe, O.—John W. Eshelman & Son, operators of elevators in Circleville, O., and Lancaster, Pa., recently purchased the Chillicothe Milling Co. at sheriff's sale. They plan to remodel and renovate the plant and place it in operation. Clyde Thomas, former manager of the Ross County Farm Buro resigned to join the Eshelman organization.

Findlay, O.—Three hundred persons attended a dinner meeting the evening of Mar. 28 as guests of the J. C. Hochstetler & Son Co. and the McMillen Feed Co. of Decatur, Ind. Following a baked ham dinner a program of motion pictures and talks was presented. Among the speakers were D. W. McMillen, president of the McMillen concern, and Frank Frantz, nutrition expert for the feed company.

Columbus, O.—The Ohio Grain, Mill & Feed Dealers Ass'n will eliminate the grain grading school which was to have been held on Sunday afternoon preceding the 61st annual convention to be held June 17, 18 at the Neil House. There will be no meeting on June 16 accordingly, but there will be a directors' meeting at 8 p. m. that evening at which all members are invited to be present if they have any suggestions or problems to present.—W. W. Cummings, sec'y.

Cleveland, O.—The Great Lakes Division of the National Scale Men's Ass'n will hold its next meeting in the Hollenden Hotel here on May 3. The meeting was originally scheduled for April 19 but was postponed. C. L. Richards, scale technologist of the National Buro of Standards, Chicago, Ill., will address the members on the subject of motor truck scales. William P. White, supervisor of weights for the Toledo Board of Trade, will attend the meeting and represent the Board.

Williamstown, O.—The Hancock County Farm Buro Co-operative Ass'n has purchased the Kleisch Bros. elevator and is putting it in operation after an idleness of several months. John C. Burkard, manager, of the co-operative, stated the same line of commodities as sold at the company's main offices would be handled at the elevator and in addition grain will be purchased from farmers. While operation of the elevator is under Mr. Burkard, a sub-manager will be named to be in direct charge at the plant at all times.

Grand Rapids, O.—The 106-year-old Pilliod Mill was damaged badly by fire the night of Mar. 25. The structure was erected in 1834 by Peter Manor, the first white settler in the area, built on a tract of land ceded him by the U. S. Government because of his friendship with the Indians in the territory. The timber in the mill was cut by hand and fitted together, no nails were used. Cleo Heising, owner of the mill, said 76 tons of feed and fertilizer and 3,000 bus. of wheat and buckwheat stored in the 60-ft. high building were destroyed and \$20,000 worth of milling machinery was damaged. He stated he believed a defective chimney was the cause of the fire.

South Solon, O.—Guy Currey, 48, operator of Guy Currey & Co. elevator, was injured fatally at 8 p. m., Mar. 25, when his automobile was struck by a west-bound Pennsylvania passenger train at the south corporation limits of South Charleston. Mr. Currey suffered a fractured skull, a crushed chest and internal injuries and died almost instantly. The automobile was demolished. He is reported to have been driving towards South Charleston and to have stopped his sedan at the crossing to wait for an east-bound freight to pass. When the crossing was cleared he started his car across but saw the oncoming passenger train, swerved his auto to the left, striking a flasher pole, but was struck almost immediately by the train.

Van Wert, O.—One of the Farmers Granary Co.'s two elevators here was destroyed Apr. 6 with a loss estimated at approximately \$60,000. The flames were seen at 1 a. m. near the top of the building when discovered. Gaylord Stemen, manager, stated 25,000 bus. of corn and more than 3,000 bus. of wheat were destroyed with the building and machinery. Only a portion of the loss was covered by insurance.

## OKLAHOMA

Edmond, Okla.—The Farmers Grain Co., E. H. Suenram, manager, now has available a custom grinding service.

Avard, Okla.—The Feuquay Grain Co. reported damage sustained at its elevator from high winds on Mar. 18.

Newkirk, Okla.—The Newkirk Farmers Co-operative Elvtr. & Supply Co. awarded the contract for its 60,000-bu. elevator here to the Tiltonson Const. Co.

Oklahoma City, Okla.—John A. Mugg, in the feed business here and at one time manager of the Panther City Grain Co., Fort Worth, Tex., died here recently.

Vici, Okla.—The A. & J. Milling Co. installed a large gas engine in the local flour mill, replacing the electric drive that the firm had installed prior to opening of the mill.

Tipton, Okla.—Ray Stansell, owner of the Stansell Feed Store, has purchased the Hatcher Mill and will manage both the store and the mill. The mill's equipment has been repaired and the plant is in operation.

Blanchard, Okla.—The Blanchard Mill & Power Co. mill was destroyed by fire early Mar. 18. The flames spread to the E. T. Golden warehouse which, along with its contents of hay, corn and three gasoline pumps, also were burned.

Enid, Okla.—New members enrolled by the Oklahoma Grain & Feed Dealers Ass'n include the Farmers Mill & Grain Co., El Reno; Oscar Dow, Okarche; Waukomis Co-operative Supply Co., Waukomis; Hacker Flour Mills, Jefferson; and Farmers Exchange, Nash.—E. R. Humphrey, sec'y pro tem.

Blackwell, Okla.—Construction of the head house at the Blackwell Mill & Elvtr. Co. has started, the contract having been awarded to the Ryan Const. Co. The new building will be on the site of the one that burned Jan. 25. An iron shed extending over the car tracks will permit of unloading wheat in any weather.

Checotah, Okla.—The Shuttan Elevator was razed by an early morning blaze Mar. 23, destroying a quantity of corn, kafir, corn meal, chops, and other cereals. Homer Shuttan, owner of the elevator, purchased the plant from C. P. Futrell last year. About a year ago, when Futrell owned it, a former elevator on the site burned.

Enid, Okla.—Elaborate plans are being made for the entertainment of the large number of grain men who are expected to attend the convention here May 15 and 16, of the Oklahoma Grain & Feed Dealers Ass'n. The Youngblood Hotel will be the convention headquarters and the scene of the many meetings of the two-day session. Interesting programs are being arranged of both an instructive and entertaining nature.

Enid, Okla.—The Farmers Co-operative Grain Dealers Ass'n of Oklahoma held its 24th annual convention in the Youngblood Hotel Apr. 4 and 5. A. W. Erickson, crop observer of Kansas City, Mo., and Gov. Leon C. Phillips and Francis Flood, associate editor of the Farmer-Stockman, were speakers on the program the afternoon of Apr. 4. A banquet held that night featured an address on "Stability in a Changing World" by Dr. A. Linscheid, president of East Central State College at Ada. The managers' and directors' breakfast on Apr. 5 was addressed by Harold Hedges, agricultural economist from F.C.A. in Washington, and a general business session with election of officers followed.

## PACIFIC NORTHWEST

'Deary, Ida.—A new roof has been laid on the Mark P. Miller Milling Co. elevator.

Pomeroy, Wash.—The Centennial Flour Mill Co. is building a 125,000-bu. elevator here.

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Hunters, Wash.—Foster Bros. are building a granary on the ground bot from the Wolfe estate.

Craigmont, Ida.—The Lewiston Grain Growers have purchased two flat grain warehouses here from D. C. Howard.

Opportunity, Wash.—Fred Hoffman opened his new warehouse recently with a stock of farm products and hay, grain and feeds.

Rosalie, Wash.—C. V. Harbour, local grain dealer, is recovering from an operation performed at the Rockwood Clinic, Spokane, recently.

Goldendale, Wash.—Maurer Bros. Feed Store has installed a 40-h.p. motor to operate their feed grinding plant. The electric power replaces the combustion motor formerly used.

Portland, Ore.—Walter Scott, manager of the Scott-Palitzsch Feed Mills, has been appointed general chairman for the annual convention of the Oregon Feed Dealers Ass'n on May 24.

Madras, Ore.—The grain elevator at the Paxton warehouse has been taken down. The elevator was built in 1916 and has not been operated since 1922. Warehouse facilities are provided for storing wheat in sacks.

Lewiston, Ida.—A \$2,500 addition to the Lewiston Grange Supply building is under way. The new structure will be 40x35 ft., of reinforced concrete. E. A. Martin is the builder; Claire Ausman is manager of the business.

Farmington, Wash.—Work on the 130,000-bu. elevator for the Farmers Warehouse & Mercantile Co. has been started and the 25-bin structure is expected to be completed in about 60 days. W. J. Morrell has the contract.

Govan, Wash.—The Centennial Flouring Mill let the contract for construction of its 75,000-bu. elevator here to Con Eckhart, and work on the structure has started. The new house will be equipped with modern, fast handling machinery.

Sandpoint, Ida.—Ray Wrights, co-owner of the Panhandle Grain & Milling Co., caught the index finger on his left hand in a freight car door at the milling company's plant along the S. I. Railroad Mar. 16, and thirteen stitches were required to close the wound.

Rodna, Wash.—The Cheney Grain Growers, Inc., will build an 85,000-bu. elevator here, to be equipped with a 6-cylinder latest type engine, including all electrical equipment for starting and stopping, a 20-ton scale and an automatic scale. Hogenson Const. Co. has the contract.

Reedville, Ore.—Charles Imlay, manager of J. B. Imlay & Sons, was elected district governor of the Washington County District of the Oregon Feed Dealers Ass'n at the recent meeting held in Hillsboro. Sec'y of the Washington County group of dealers will be Clarence DeFries of DeFries & Smith of North Plains.

Arco, Ida.—Plans have been completed for operation of the local alfalfa mill on a co-operative basis. Philip Borup, Pocatello, junior specialist of the F. S. A. for southeast Idaho, was present and assisted with plans for incorporation and to help make application for a loan with which to carry on the hay mill operations.

Coulee City, Wash.—The Centennial Flouring Mills will erect a 100,000-bu. elevator here, work to begin immediately, Carl V. Jensen, local manager, announced. Con Eckhart has the contract. The present warehouse facilities of the company here is a maximum of 80,000 bus. Glen Bean is local manager. A 30,000-bu. elevator owned by the company was destroyed by fire several years ago.

Lewiston, Ida.—H. A. Conlee and T. A. Kemper have formed the Conlee-Kemper Co., and the firm has started activities at the former Lewiston Milling Co. plant. Specializing in mixed feeds, the company will also contract for the growing of malting barley and flax. The old flour milling machinery is being dismantled and removed, and the mill is being rearranged into an up-to-date feed mill.

Lamont, Wash.—Two new bulk elevators have been approved for construction here. George Rosenzweig, manager of the Pacific Coast Elvtr. Co., received approval of plans for erection of a 100,000-bu. bulk elevator to add to the company's storage facilities. Work is underway on a high-type bulk elevator for Lamont Grain Growers, Inc., on a site between the present elevator and the grain office. Mgr. Hugh Stone stated the elevator will be ready for the coming crop.

Richmond Highlands, Wash.—When additions and alterations in progress at the Richmond Highlands Feed Store are completed, the former space of the firm will be about doubled. R. E. Cooper, proprietor, stated. The hay storage room has been extended north and space partitioned off for the feed mill. The office room will be doubled in size by using the space formerly occupied by the mill and new storage bins will be added for bulk products.

Portland, Ore.—The 47 feed dealers who attended the golf tournament and dinner held by the Washington County District of the Oregon Feed Dealers Ass'n on Mar. 26, reported an especially enjoyable affair. Four golfers tied for low in the handicap tournament, H. E. Cosby, of Corvallis; John Alexander, Portland; Ed Holland, Scio; and Bob Seufert. High gross honors went to Gordon Burlingham of Forest Grove, who was most ably assisted in the various phases of the adventure by Paul Lee of Amity. Everybody had a good time. During the evening short talks were made by H. E. Cosby and Walter Upshaw of the state department of agriculture.

Cottonwood, Ida.—The Lewiston Grain Growers, Inc.'s new elevator was formally opened to the public Mar. 18, when all machinery in the place, the new unit was ready to receive grain, handle grain cleaning, treating, grinding and do all kinds of custom work. The 260,000-bu. elevator has a base dimension of 72 x 64 ft. and the overall height is 110 ft. from the pit bottom to the top of the head house. The latter reached a height of 90 ft. above the ground level. Latest type high speed handling machinery will permit unloading of 3,000 bus. per hour at top capacity. The final metal covering will be placed on the building after it has been allowed to settle for one season.

The Dalles, Ore.—Merger of the Sherman Co-operative Grain Growers, Grass Valley Grain Growers, Moro Grain Growers Ass'n and the Wasco County Grain Co-operative has resulted in a tentative program to construct a million bushel elevator here to load Inland Empire wheat in deep draft vessels. The four Co-ops. have formed the Mid-Columbia Terminal Co., with W. T. Balsiger of Moro as president. Each group will retain its identity in operating warehouses but pool interests to build a terminus. The company will purchase the Wasco County Grain Co-op's bulk wheat facilities and Big Eddy warehouse, Mr. Balsiger stated. He explained the enterprise developed from the shipping trend from sacked to bulk wheat.

Troy, Ida.—The Mark P. Miller Milling Co. of Moscow has purchased the F. M. Green Grain Co., and announces the forthcoming erection of a 100,000-bu. crib-type elevator here this spring, construction to start April 1. Possession of the Troy properties, however, will not be acquired by the Miller interests until July 1, just before the 1940 harvest. Included in the purchase are warehouses here with a capacity of 200,000 bus. of sacked grain, feed grinding, handling and cleaning equipment. The company now has holdings at Moscow, Howell, Joel, Deary, Viola, Estes and Avon in Latah County besides properties in Whitman County, Wash. Mr. Green will retire from active business. He formed his grain company in 1905, a year after he came here.

## PENNSYLVANIA

Scottdale, Pa.—Joseph R. Campbell, 84, retired hay and grain merchant, died at his home Mar. 17.

Pittsburg, Pa.—Fire badly damaged the hay and grain storage of S. B. Floyd & Son Mar. 24, the blaze starting in a hay storage room on the second floor, and spreading rapidly thru the three story brick building. The business is operating and the structure will be rebuilt.

Lisburn (Mechanicsburg p. o.), Pa.—The 70-year-old Lisburn grist mill, owned by Earl Hoffman, was destroyed by fire Mar. 28. The mill with a 1½-story annex adjoining it, 3,500 bus. of wheat, tons of grain and feed, three automobiles and a \$3,500 power plant were included in the loss, estimated at many thousands of dollars, with no insurance on either the building or its contents. The blaze is believed to have started as combustion in a large bale of peat moss. The owner's wife was stricken with a heart attack, brought on by the shock of the fire, and is in a serious condition.

## Grain Shipping Books

**Record of Cars Shipped** facilitates keeping a complete record of cars of grain shipped from any station, or to any firm. It has column headings for Date Sold, Date Shipped, Car Number, Initials, To Whom Sold, Destination, Grain, Grade Sold. Their Inspection, Discount, Amount Freight, Our Weight Bushels, Destination Bushels, Over, Short, Price, Amount Freight, Other Charges, Remarks. Book contains 80 double pages of ledger paper, size 9½ x12 inches, with spaces for recording 2,320 carloads. Well bound in heavy black pebble cloth with red keratol back and corners. Shipping weight, 2½ lbs. Order Form 385. Price \$2.50, plus postage.

**Sales, Shipments and Returns.** Is designed to save time and prevent errors. The pages are used double; left hand pages are ruled for information regarding "Sales" and "Shipments"; right hand page for "Returns." Column headings provide spaces for complete records of each transaction on one line. Book contains 80 double pages of ledger paper, size 10¼x16 inches, with 8-page index. Spaces for recording 2,200 carloads. Bound in heavy gray canvas with keratol corners. Weight, 3¾ lbs. Order Form 14AA. Price \$3.35, plus postage.

**Grain Shipping Ledger** for keeping a complete record of 4,000 carloads. Facing pages are given to each firm to whom you ship and account is indexed. Book contains 80 double pages of ledger paper with 16-page index, size 10½x15¾ inches, well bound with black cloth covers and keratol back and corners. Weight, 4 lbs. Order Form 24. Price, \$3.50, plus postage.

**Shippers Record Book** is designed to save labor in handling grain shipping accounts and provides for a complete record of each car shipped. Its 80 double pages of ledger paper, size 9½ x12 inches, provide spaces for 2,320 carloads. Wide columns provide for the complete record of all important facts of each shipment. Bound in heavy black cloth with keratol back and corners. Shipping weight, 2½ lbs. Order Form 20. Price \$2.50, plus postage.

**Shipping Notices** duplicating, 50 originals of bond paper, 50 duplicates, press board cover, 5½x8½ inches, weight 8 ozs.; 2 sheets of carbon. Price 70 cts. plus postage.

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**Railroad Claim Blanks** duplicating, three different books, five forms, 8½x11 in., \$2 each book, plus postage.

## Grain & Feed Journals

CONSOLIDATED

332 South La Salle St., Chicago, Ill.



## SOUTH DAKOTA

Stickney, S. D.—Lloyd Smith, former manager of the Geddes Grain Co. elevator at Geddes, has accepted a position with the Carlson Elevtr. Co.

Redfield, S. D.—Clyde Muggerud, formerly employed at the National Atlas Elevator, left Apr. 1 for Florence, S. D., where he will manage an elevator.

Rosholt, S. D.—The Farmers' Elevtr. Co. has appointed Orlando A. Bjork of New Effington to succeed his father, Ole A. Bjork, who resigned as manager of the elevator, effective June 1.

Canton, S. D.—E. H. Rudloff, 49, a partner in the Sioux Valley Grain Co., passed away Mar. 20 at his home here. Death was due to a heart ailment from which he had suffered for some time. Interment was at George, Ia., his native town.

Sioux Falls, S. D.—William A. Mills, 75, veteran grain and fuel dealer in Sioux Falls, died Mar. 27 at his home after an illness of about three months. He was the founder of the Mills Grain & Supply Co., but retired from active work in the firm several years ago.

Winner, S. D.—The Tripp County Farmers' Co-operative Ass'n has purchased the grain elevator at Winner and Witten, S. D., at a mortgage sale. The Ass'n, a newly-organized co-operative of farmers in Tripp County and vicinity, paid \$13,100 for the elevators.

Chancellor, S. D.—The Lensch Grain Co.'s elevator which has been closed for the past few weeks, will re-open soon with Claus Hoogestraat as the new manager. Mr. Hoogestraat has had considerable experience in the grain business, having owned and operated an elevator here some years ago.

Aberdeen, S. D.—According to a new ruling of the South Dakota Division of Taxation, many of the state's farmer elevators have been granted exemption from the payment of the state income tax. Previously all exemptions when granted relieved the corporation of the duty of filing tax returns. A ruling from this department, however, now provides as follows: "However, we require that all corporations must file returns without regard to the taxability of their income. The return need not be elaborate but may merely be a copy of the annual report attached to one of the corporation income tax forms and with the notation across the form, 'Co-operative Association, exempt from net income taxation.'" It is suggested that those elevators now exempt from payment of the South Dakota Net Income Tax, have their auditor prepare an extra copy of their annual report so they may comply with the above.—C. G. Anderson, sec'y Farmer Elevtr. Ass'n of South Dakota.

## SOUTHEAST

Mullins, S. C.—Carl Ellis will move his grist mill into his new two-story brick building within a few days.

## TENNESSEE

Rogersville, Tenn.—The Rogersville Milling Co. is installing equipment in its new building, doubling its capacity of 75 bbls. The plant will resume operations shortly. It is operated by J. W. Livesay and his son.

Huntland, Tenn.—Plans are on foot to locate a soybean mill in this county. A meeting to discuss the subject was held here recently. J. A. Center, agricultural agent for the N. C. & St. L. Railroad, was present and joined in the discussion.

## TEXAS

Amarillo, Tex.—The Panhandle Grain Dealers Ass'n will hold its convention here May 13 and 14. Plans are being made to entertain a large number of grain men on that occasion. Grain dealers throughout the country are invited to attend. Headquarters will be at the Herring hotel.

Fredericksburg, Tex.—The Reliance Roller Mills, which until recently was under the management of Otto Fritz, has been leased by W. G. Riedel of Karnes City and R. C. Marshall of Runge, who will operate the feed mills and sell a complete line of seeds, feeds, etc., under the firm name of the Reliance Feed & Seed Co.

Sealy, Tex.—The Sealy Grist Mill recently installed a new feed mixer.

Frisco, Tex.—The Griffin Grain Co. has been organized; capital stock, \$17,000. The incorporators are V. M. Bennett, and Marion T. Griffin. The company will engage in the grain elevator business.

Fort Worth, Tex.—Felix Meyer of Felix Meyer & Co., has purchased from the Doggett Grain Co., of Dallas, the elevator property located on the Fort Worth Belt Railway in North Fort Worth, known as the Panther City Elevator, and has taken over its operation. The business in the future will be known as the Panther City Grain Co. and Henry Eldson, in charge of the Felix Meyer & Co.'s local office, is in charge as manager. A general line of grain, millfeeds, field seeds, hay and mixed feeds will be handled.

Fort Worth, Tex.—The Texas Grain & Feed Dealers Ass'n convention to be held at Hotel Texas May 10 and 11 will be the first of three grain dealers' conventions that will engage the interest of all grainmen of this section of the country. Immediately following the local convention, the Panhandle Grain Dealers Ass'n will convene at Amarillo May 13 and 14, and on May 15 and 16 the Oklahoma Grain & Feed Dealers Ass'n will hold its session at Enid, Okla. At all three gatherings preparations are being made to entertain a large number of persons and excellent programs of instruction and entertainment have been arranged. A grain grading school sponsored by the Texas Grain & Feed Dealers Ass'n and the Fort Worth Grain & Cotton Exchange will precede the gathering here, held on May 9 when able instructors will be on hand to demonstrate how the expert arrives at the grade on grain and seed.

## UTAH

Ogden, Utah.—The Western Food Products Co. has opened for business, F. O. Beddall and E. M. Reed partners in the new firm. The plant will manufacture two brands of products, Ace Treats and Puf Treats. Hard types of wheat will be used. The grain will be heated under pressure in an especially constructed chamber or "gun" for eight to ten minutes, and then shot out, the hot, moist kernels exploding as they hit the colder air, and fall into a bin. Capacity construction is 70 cases per day.

## WISCONSIN

Cashton, Wis.—The Western Supply Co. feed store owned by John Kress was badly damaged by fire.

Madison, Wis.—The Hoffman Feed Co., Inc., reported a small loss at its plant from high winds Mar. 11.

Bear Creek, Wis.—The Schneider Mill Co. has purchased the feed mill formerly owned by A. W. Kieselhorst.

Rock Elm, Wis.—Troy Harris and Fred Shaw have taken over and are operating the August Martin feed mill.

Bangor, Wis.—Fire, largely confined to the main drive belt, caused a small loss on Mar. 13 at the Schuster Flour & Feed Co. mill.

Superior, Wis.—The King Midas Flour Mill Co. is considering installation of another milling unit equal in capacity to that already in operation here.

Janesville, Wis.—Glenn Wolfe has taken over the management of the Graham Feed & Seed Co. with Fred Churchill and John McDonnell as assistants.—H.C.B.

Milwaukee, Wis.—The annual convention of the Central Retail Feed Ass'n will be held June 3 and 4 at the Schroeder Hotel, David K. Steenbergh, sec'y, has announced. A full week will intervene between the Central group's meeting and the convention of the American Feed Manufacturers Ass'n, which will gather at French Lick, Ind., May 23 and 24.

Milwaukee, Wis.—E. H. Hiemke was elected president of the Milwaukee Grain & Stock Exchange Apr. 1. Other officers named were: First vice-pres., W. C. Holstein; second vice-pres., C. A. Houlton; sec'y-treas., H. A. Plumb; directors, H. H. Hicks, J. Howard Mallon, Lewis E. McClellan; Board of Arbitration: John G. Davis, Clarence D. Moll, Paul E. Riebs; Board of Appeals: Thos. M. Corcoran and John V. Lauer.

Lodi, Wis.—The Lodi Grain & Coal Co. has been incorporated, to deal in feed, grain and fuel; capital, 600 shares, par \$17.50 each; incorporators, L. A. Spiede; Wm. F. Graves; W. C. Caldwell.

Bear Creek, Wis.—The Flanagan Milling Co. has opened a feed store in the Heckman building. Grinding and mixing is being done there in addition to handling a complete line of feeds, flour, etc., and specializing in dairy ration and egg mash.

Kewanee, Wis.—A new leg has been installed in the Jo-operative Store elevator. Julius Stangel, manager, stated improvements made at the plant have increased the storage capacity about 30 per cent. Proposals for enlarging the elevator to provide about three times as much space as at the present will be considered at a board of directors' meeting to be held in the near future. A new grain cleaner was recently installed at the plant.

Superior, Wis.—Congressman B. J. Gehrman has warned Superior and Upper Wisconsin residents that passage of a bill now pending before the house committee on agriculture would seriously affect the city by eventually causing Superior to lose the office of the Wisconsin Grain & Warehouse commission. The bill, he said, would confer broad powers of investigation upon the sec'y of agriculture and it is the opinion of all railroad and utility commissions that this would eventually serve to wipe out all state grain inspection and weighing bureaus thru amendment of the 1916 U. S. Warehousing act.

## WYOMING

Gillette, Wyo.—The Kirby Grain Co. recently sponsored a plowing demonstration at the Roy Hardy ranch, one mile south of here.

Small mid-western millers from Iowa, Missouri and states north and west will meet at Omaha, Neb., Apr. 26 and 27 to hear addresses by 10 able speakers, including one on "Insect Control" by O. S. Bare of the entomology department of Nebraska College of Agriculture.

## Railroad Claim Books

(Duplicating) require little of your time for filing, and contain spaces for all the necessary information in the order which assure prompt attention by the claim agent. They increase and hasten your returns by helping you to prove your claims.

- A is for Loss of Weight in Transit Claims.
- B—Loss in Market Value Due to Delay in Transit.
- C—Loss in Quality Due to Delay in Transit.
- D—Loss in Market Value Due to Delay in Furnishing Cars.
- E—Overcharge in Freight or Weight.

These claim blanks are printed on bond paper, well bound in book form, each book containing 100 originals and 100 duplicates, a two-page index, instructions and summary showing claims unpaid, and four sheets of carbon.

The five forms are assembled in three separate books, each of 200 leaves, weight 3 lbs. Price of each book \$2.00, plus postage.

- 411-A contains 100 sets all Form A.
- 411-E contains 100 sets all Form E.
- 411-5 contains 60 sets Form A, 10 Form B, 10 Form C, 10 Form D and 10 Form E.

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## Supply Trade

**Schenectady, N. Y.**—Orders received by the General Electric Co. in the first quarter of 1940 amounted to \$97,490,047, compared with \$86,882,953 for the corresponding period in 1939, an increase of 12 per cent.

**Washington, D. C.**—The U. S. Supreme court ruled Mar. 25 that patent owners may not extend their legal monopoly to control their products after they reach the dealers, and specifically may not impose restrictions that fix prices. In a unanimous decision the court held that the Ethyl corporation was violating the Sherman antitrust act by its system of licensing 123 refiners to make antiknock fuel with its patented tetraethyl lead fluid, and in turn making the refiners license dealers.

**Lancaster, Pa.**—The National Association of Manufacturers has called on American industrialists to "mobilize" in a country-wide campaign for the principle of private enterprise. H. W. Prentis, Jr., association president, sounded the keynote by asserting that "Industry and private enterprise will never be fully understood as long as the confidence destroying attacks of demagogic detractors are allowed to go unchallenged." He described private enterprise, together with civil and religious liberties, as "the tripod of freedom."

**Montreal, Can.**—James Alexander Jamieson, well known to the terminal grain industry as a consulting engineer, experimenter and student in grain handling and storage, and author of "Grain Pressures in Deep Bins," a terminal elevator engineering authority, passed away in the Royal Victoria Hospital, Mar. 27. He was 81 years old. For a time he was associated with the engineering department of the Canadian Pacific Railway. Later he entered business on his own account as a consulting engineer. He was a veteran member of the Engineering Institute of Canada and was associated with many important terminal elevator building projects thruout Canada. In spite of his advanced age, Mr. Jamieson was active in business to within a day of his death.

## The Castor Bean

By E. B. REYNOLDS, Texas, Agri. Exp. Sta.

Recently a new interest has been aroused in the promotion of the castor bean industry, especially for the production of certain insecticides, cellulose, drying oil for paints, varnishes, and lacquers, and perhaps other products from the plant, in addition to the present castor oil industry.

In order to secure additional information on the adaptation and production of the plant in Texas, experiments were again begun in 1938. Under irrigation at Iowa Park (near Wichita Falls) one variety made a yield of 57 bus. per acre in 1938. In 1939 the work was conducted at the main station at College Station and at eight substations: Angleton, Beaumont, Beeville, Iowa Park, Lubbock, Temple, Tyler, and Weslaco.

The average yield of all the varieties was 23 bus. per acre at Lubbock, 18 bus. at Iowa Park, 16 bus. at Temple, 19 bus. at Weslaco, 12 bus. at Angleton, 7 bus. at College Station and 3 bus. at Beaumont. One variety produced approximately 16 tons of green vegetable matter per acre at Lubbock in 1939. These yields probably represent what may be expected in yield of seed for oil production with the present varieties of castor beans, all of which are more or less mixed and variable in plant characters and yield.

It seems to be the present opinion that the growing of castor beans for oil only is not profitable and for this reason other practical uses must be found if the industry is to develop and prosper.

## Air Compressor Cleans Motors

Open type motors in grain elevators and feed plants are operated normally under very unfavorable conditions, points out A. E. Leif, enterprising field man for the Grain Dealers Fire Insurance Co., in Indiana. Dust, he claims, does serious injury to the efficiency and length of life of these motors.

Many owners try to have each motor serviced completely once each year, but a great deal of dust can accumulate in a motor within a year, and regular blowing out of the motor with air will contribute to its life and usefulness.



A. F. Leif demonstrates compressor.

Suggested is a small air compressor outfit. In the accompanying photograph, Leif is demonstrating one made by Miller-Simons, Inc., which utilizes a piston type compressor, mounted, with explosion proof motor, on a pressed steel base, carried on ball bearing, rubber-wheeled casters. Its equipment includes a 6 inch non-ferrous nozzle, 25 ft. of type S electric cord and plug, and 25 ft. of air hose.

In demonstrations in elevators, says Leif, this

unit efficiently blew the dust from inside locations in motors where it normally rested unseen, and did a real job of cleaning.

## Proper Action in a Scale Beam

By W. L. FRANK, Cleveland, O.

Proper action of a scale beam is very important. The beam is the most delicate and the most sensitive part of the ordinary scale. Therefore, it is the beam that is most likely to be affected by a bind, an interference, or a defect in scale installation, in the alignment of the scale parts, or by worn or defective pieces in any part of the scale. Anything that impairs a scale in any way affects the action of the beam, hence the importance of carefully watching the action of the beam for sign of trouble.

In almost every case, a good weighmaster can tell from the action of his beam, when there is something seriously wrong with his scale. It would be difficult to list all of the variations that might be found in beam performance, and the condition that is responsible for each.

Balance the beam carefully. Release the beam at the bottom of the loop, and note that the beam moves slowly upward in a smooth and steady motion, accelerating for the first half of the swing, then decelerating as the end of the swing is approached; stopping momentarily at the end of the swing, then repeating the acceleration and deceleration, etc. The first upswing, and the return swing of the beam constitutes one cycle of beam oscillation. The time required for a beam to complete one cycle of oscillation, is called the "period of oscillation," and should not be less than 10 nor more than 15 seconds, for the most satisfactory operation.

A longer period of oscillation than 15 seconds indicates that the beam is oversensitive. A period of less than 10 seconds indicates that the beam is not sensitive enough, or that the scale is badly worn, or otherwise defective.

If a beam accelerates as it approaches the top or bottom of the trig loop, and tends to remain in direct contact with the top or bottom of the trig loop, the beam is probably magnetized, or it is extremely sensitive, possibly oversensitive. Both of these conditions are objectionable, and make proper operation of the scale difficult if not impossible.

Unsatisfactory beam action is the first indication of unsatisfactory scale conditions. It is a danger signal that should not be ignored.



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# Field Seeds

**Belle Fourche, S. D.**—Paul Ashley of Vale has opened a seed house.

**Junction City, Ore.**—Growers of rye grass seed have agreed to hold their 1940 crop for 4 cents.

**Big Spring, Tex.**—A seed and feed store has been opened here by Jos. Coursey and Brantley Malone of Lubbock.

**Moscow, Idaho.**—Val Ruckman has engaged in the seed business with a store in South Main street, known as Val's Seed Service.

**Little Rock, Ark.**—W. E. Bass has sold his interest in the Bass-Isgrig Seed Co. to his partner, Ben C. Isgrig, who continues under the old name.

**Ontario, Ore.**—Evan Gheen and others are temporary directors of a company being formed to make a bid for the local seed plant of the Michael-Leonard Seed Co.

**Keokuk, Ia.**—The Earl May Seed Co., of Shenandoah, has opened a seed store here in charge of Milo H. Hoppe of Nebraska City, Neb., making the 30th May seed store.

**Sikeston, Mo.**—Ira Dodd, operating a farm, has purchased the seed store of Chas. Butler, which will be conducted by Mrs. Dodd and her sister, Miss Leota Roberts.—P. J. P.

**Anna, Ill.**—An up-to-date machine has been installed by the Phoenix Flour Mills in its grain elevator to clean field and grass seeds for the mill and for farmers and seed growers.

**Bismarck, N. D.**—R. E. Thompson, manager, states that the Dacotah Seed Co. will take down its 10,000-bu. elevator and erect 35,000-bu. plant on the site, to be completed about May 15.

**Sedalia, Mo.**—L. A. Kipping, for 39 years with the Archias Seed Store, has engaged in the seed business on his own account with a store on South Osage street, carrying a full line of field, garden and flower seeds.

**Springfield, Ill.**—Soybean seed from the northeastern corner of the state is reported by the state seed laboratory to be germinating better than seed grown farther south where temperatures were high during the maturing period.

**Portland, Ore.**—Lensch Bros., for 40 years in the feed business, have recently considerably enlarged their seed department. The sales floor has been remodeled and the room painted white. The additional space is used for displays of bulk and packaged field and garden seeds, and lawn and garden fertilizers.

**Lafayette, Ind.**—Demand for white hybrids due to seasonal favorable price differential on white corn has far exceeded the small supply of top crossed or hybrid seed available for 1940 planting, and farmers desiring to plant white corn will have to use adapted open pollinated varieties in most cases.—K. E. Beeson, Purdue University Extension Agronomist.

**Lewiston, Idaho.**—An elevator belt choked while the head pulley kept turning, the friction burning the belt in two, and it dropped, setting fire at several floors of the elevator building of the Mark A. Means Co. Mar. 22. The house contained cleaning machinery and 10 carloads of seed peas, damaged by water, and was valued at \$35,000. The loss is several thousand dollars. Hand picking by the crew of 60 women was resumed next week and machine operations a few days later.

**Chicago, Ill.**—Chicago seedsmen are planning to entertain delegates to the convention of the American Seed Trade Ass'n June 24, to June 27, with a president's reception, cocktail party, luncheons for the ladies at the Edgewater Beach Hotel and at a leading department store with style show, and a night baseball game. Other entertainment is contemplated in addition. The arrangements were considered at a recent meeting between the local seedsmen and Roy Edwards, president of the Ass'n.

## Recovery for Wrong Variety of Seed

Plaintiff, Wernicke, bought of the West Coast Lumber Co. what was represented and believed to be Texas ribbon cane seed but on approach to maturity the crop was discovered to be 60 per cent kafir corn, the seed of which is practically indistinguishable from ribbon cane seed.

The two varieties matured at different times so they could not be harvested together. For the loss plaintiff brought suit and was given judgment for \$1,750.

The Supreme Court of Florida said: "It seems quite clear that kafir corn and Texas seed ribbon cane are members of the sorghum family, and that the seed of the two plants cannot be distinguished one from the other, even by an expert, except upon minute examination. The character of the two plants is such that they do not require the same period of time for germination and growth to maturity. Where the seeds are planted at the same time, as was done in this case, and a great proportion of the crop is ready for the harvest while the remainder has not reached maturity, it seems that a loss in the tonnage would be inevitable.

"The other phase of the claim for damage is based on a difference in the characteristics of the two varieties of sorghum when they do finally mature. Because one retains moisture it easily 'sours' when placed in a silo and, of course, spoils the contents.

"The damage complained of by the plaintiffs is easily traceable by the testimony to the shortage of tonnage as a result of the mixing of the seeds as well as the spoilage of the entire crop by reason of the admixture.

"In his charge to the jury the court admon-

## Seed Movement in March

Receipts and shipments of seeds at the various markets during March, compared with March, 1939, in bus., except where otherwise indicated, were:

	FLAXSEED		Shipments	
	1940	1939	1940	1939
Chicago	12,000	.....	8,000	37,000
Duluth	2,216	853	1,258	82,405
Ft. William	11,438	3,647	4,221	5,125
Minneapolis	127,400	62,400	88,200	63,600
Superior	760	926	.....	57,646
	KAFIR AND MILO			
	1940	1939	1940	1939
Ft. Worth	75,000	58,500	108,000	78,000
Hutchinson	10,500	30,000	.....	.....
Kansas City	22,400	72,800	43,200	102,000
St. Louis	8,400	9,800	2,800	5,600
	CLOVER			
	1940	1939	1940	1939
Chicago, lbs.	1,099,000	1,520,000	810,000	1,261,000
Milwaukee, lbs.	234,225	209,430	1,112,855	1,274,500
	TIMOTHY			
	1940	1939	1940	1939
Chicago, lbs.	443,000	942,000	262,000	1,531,000
Milwaukee, lbs.	115,660	392,935	640,620	569,979
	CANE SEED			
	1940	1939	1940	1939
Fort Worth	28,000	22,400	25,200	7,000
Hutchinson	1,400	.....	.....	.....
Kansas City	4,200	1,400	11,400	4,800

ished them that there was no 'claim of warranty as to the quality of the seed, whether or not it would germinate,' that the only claim was based on its not being the proper kind of seed, not having the seed they bought and which the defendant claimed to sell them.'

"The court also instructed the jury that the measure of damage would be the difference between the crop actually raised and its value had the seed been true to name, after taking into consideration whether or not proper care was shown by the farmer in growing and harvesting the crop."—188 *Southern Rep.* 357.

## Handling Government Seed Peas

Seedsmen recently met at Salem and Corvallis, Ore., with representatives of the A.A.A. and drew up contracts for handling government seed peas. It is proposed that dealers buy peas from the growers, clean, handle and deliver to the government on cars, guaranteeing quality, for \$3.40.

A second proposal called for the dealers to merely handle the peas, not buying nor guaranteeing quality, for 25 cents.

The state A.A.A. com'te favors the proposals, but must forward them to Washington for approval.

## Hybrid Vigor and Seed Characters

M. E. Paddick and H. B. Sprague of the New Jersey Experiment Stations, report that the pollen parent seemed to be able to exert some influence on the weight of both the germ and the endosperm of the corn kernel and the ratio between them. The general effect of outbreeding on the kernel is size stimulation.

Germ size in reciprocal hybrid kernels might vary greatly despite uniformity of mature plants tending to substantiate Sprague's views on Ashby's hypothesis that embryo size is not a significant factor in the induction of hybrid vigor.

The ratio of endosperm-germ weight within a specific line appeared to remain relatively constant regardless of kernel size. No correlation was apparent between weight increase of hybrid kernel germ over that of the ear parent, when borne on the same ear, and forage-yielding ability. A barely significant correlation ( $r = 0.39$ ) was seen between this germ weight increase and grain-yielding ability of hybrid strains.

## Meaning of "Noxious Weed Seed—None Per Pound"

The statement "Noxious Weeds—None per Pound" should not be interpreted to mean, necessarily, that no noxious weeds are present, and in order to save misunderstanding between seedsmen and customer, this point should be made clear in all transactions.

In lespedeza, for example, the analysis for the determination of noxious weeds is ordinarily made on a sample of only one-ninth of a pound of lespedeza seed. Dodder could easily be present in the seed at the rate of 4 or 5 dodder seeds per pound without its presence being detected in a sample of this size. In this way, fields sowed with lespedeza seed which was bought to contain "Noxious Weed Seeds—None per Pound" may show up in the summer with considerable dodder, and at the same time the analysis and the tag under which it was sold could have been correct.

The only reasonable assurance against noxious weeds in seeds is to buy seeds produced from fields which have been inspected and found free of them, as is the case with state certified seed.—Arkansas State Plant Board.



## Truckers Fined for Selling Untested Seed

Five truckers recently have pleaded guilty in justice courts in Sharp, Izard and Greene Counties, Arkansas, to charges of transporting or selling untested lespedeza seed. S. B. Armstrong of Ash Flat was fined \$10 and costs at Hardy. Tests by the Plant Board showed that the lespedeza which he was selling to farmers contained approximately 200,000 seeds of dodder (a noxious weed) per pound of lespedeza seed (about half and half).

J. H. Pigman, Senath, Mo., was fined \$10 at Sydney; and Carl Gaston of La Crosse, and Earl Turner of Sage were fined \$10 each and costs.

Leslie Roberts of Rector was fined \$10 and costs of \$4.00 by Judge Jackson of Paragould. Roberts was selling untested soybean seed, as well as untested lespedeza, at a live stock auction barn.

It is illegal to sell seed for planting purposes in Arkansas unless it has been tested and unless there is attached to each bag a permit tag issued by the State Plant Board on which the analysis is given. The only exception is seed sold on the premises of the producer thereof.

## Urges Care with Hybrid Corn Seed

New York state farmers are urged to be on their guard in buying hybrid corn seed that originated in other states.

"Apparently," says Dr. F. P. Bussell of the department of plant breeding at Cornell, "more hybrid seed was produced in the Corn Belt states last season than is needed to plant the acreage there.

"If dealers will discriminate carefully and stock only the best, they can hand their farmer patrons gold nuggets instead of gold bricks," he says.

The sales argument is that hybrid seed is su-

perior in performance to seed of open-pollinated varieties and tests in other states are cited as proof.

"This argument holds good only for hybrids which are well adapted to the particular area where the seed is to be planted and a crop grown," says Professor Bussell. "Corn breeders recognize this principle, and throughout the corn belt each state is divided into many distinct areas or zones. For each zone one or more hybrids are recommended. Different hybrids are recommended for other zones."

## Sales Distribution of Hybrid Seed Corn

By C. M. MADDOX, Oxford, Ind.

The rapid development of hybrid seed corn has made possible a large number of producers, which has consequently led to an oversupply of salesmen, and a deplorable situation, which the larger and more reliable seed companies regret.

Hybrid corn, like any other new product offered to the public, has required a great deal of educational and promotional work. This work has in most part been accomplished, and due primarily to the commodity itself, and to the activity of extension service and newspaper publicity, hybrid corn has been thoroly sold to the farming public. Naturally the next step was to sell the individual brand and variety of hybrid offered by the producer and salesman. This objective can be accomplished by advertising and personal contact with the potential purchaser. There are several ways in which a product may be advertised, by magazine, radio, or poster displays and last and most important the actual performance of the hybrid itself.

The other necessary part of the selling program is the personal contact. There are several methods of making such a contact. The least effective is by correspondence or indirect contact. Another which is the most effective is by individual contact by a party engaged in selling the product.

*Dealer is Best Medium*—Hybrid seed corn merchandising can be best accomplished by the dealer who is an individual or firm engaged in the business of buying and selling a product for profit. These dealers in most states must be licensed and subject to taxation before they are permitted to operate their business. They may be referred to as legitimate business men and have reputations established, and expect to earn their livelihood from a successful merchandising of some specific commodities. The writer refers to such businesses as grain dealers, seed and feed dealers, in particular.

The other method of distribution is that of the agent, who in most cases may be an individual who devotes a part of his time to selling a specific product, in this case, hybrid seed corn, and who may or may not continue in such an activity, and who is only interested in the personal remuneration for the present. The success or failure of an agent depends on the individual, because of the peculiar background of the agent, his contribution to an industry is generally of short duration. The success of the agent in the merchandising of seed corn has had a tendency to discourage the dealer, and has left him in a quandary as to whether or not he has a place in the merchandising of seed corn.

It is the writer's firm conviction that the dealer definitely has a place and is entitled to the number one spot in its distribution. The sale of hybrid seed corn is like any other competitive article, in that it requires as much sales organization and effort to sell as any other product. The dealer should first select a brand of

corn from a reputable firm, from whom he may expect a quality product at a reasonable price, a fair profit to himself, guaranteeing satisfaction to the customers, and rendering a service to the agricultural community which the dealer serves.

A dealer should not endeavor to try to handle all brands of hybrid seed corn. When he does, he becomes an order taker, and can sell none.

The agent's partial success has been due to his sale of one brand and he himself has become thoroly sold on its merits and conveys its possibilities to his prospect. The dealer is the logical man to sell hybrid seed corn as well as the other articles which he has to offer in his store. His customers have respect for his judgment, as they know that he expects to sell them again and again, and is as interested as they themselves are in the merit of whatever they may purchase from him. The dealer's customers also feel that he is rendering them a service when he is able to sell them an article which proves profitable to the customers. They buy, not for friendship, but for the purpose of obtaining an article of profit to themselves.

A successful dealer is an individual or firm

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who brings to his trade a commodity which proves that it is profitable to the purchaser. A prospective customer by his calls in his place of business becomes conscious of the products offered for sale, by seeing it on display and having it discussed, and by ever being reminded of its merits.

The writer recalls a remark made by a successful young business man in an agricultural community relative to hybrid seed corn. He remarked thus, "As competition in hybrid seed corn sales is keener than ever before, I must make an added effort to increase my sales to my customers, not for the necessary profit involved, but for the moral responsibility to my trade, in protecting them from a cheaper substitute sacrificing a higher quality and a superior performing hybrid, because their prosperity means more profit to me from other sources, as corn is the basis of farm income and the farmers' purchasing power." This man was engaged in the grain and feed business and felt that he was not only entitled to their business, but could readily obtain it by his initiative, with a fair profit to himself and render a service to them.

Producers as a whole prefer a legitimate dealer for an outlet of their seed corn and in most cases have approached the dealer to merchandise it. The dealer in many cases has felt that he might jeopardize his position by selling a particular brand of hybrid seed corn. He fears in so doing he recommends this brand above that of another or that of a neighboring producer whom he feels does not have a hybrid of sufficient merit for the dealer to offer to his customers. He then takes the easiest way out by not selling any hybrid. Consequently losing a profit himself and encourages the thing which he himself criticises, the selling of seed corn thru an agent. The time will soon arrive when

he will find that his competitor in business has looked further than he did and by initiative has accepted a hybrid seed corn which has proven to give satisfaction to its purchasers and this competitor has built a successful seed corn business based on a firm foundation of satisfied customers.

## Field Seed Production Estimates

By M. C. ZELLNER, chairman seed statistics com'te of Farm Seed Group of A.S.T.A.

I went to Washington as a seedsman with the seedsman's point of view to try to get a better understanding of how the various estimates of field seed production are arrived at, learn the why of the big difference between the forecast reports and the December estimates, and to discuss with those responsible for compiling these reports the steps being taken or that could be taken to bring the two reports into closer accord.

I was fortunate in being able to discuss these problems with every one in the Crop Reporting Service who is directly connected with the compiling of these figures—Messrs. Callander, chairman of the Crop Reporting Board, Becker, Koenig, Edler and Kuzelka.

I explained to them that naturally we in the seed trade were rather disappointed that for the second year in succession their December estimates exceeded by a considerable amount their forecast estimates on a number of commodities and stressed the importance to the seed industry of getting as accurate a forecast as possible because most of the movement of seed crops takes place between the issuance of the forecast report and the December estimate, and that it is a very serious matter for the recleaners and distributors to have to buy on the basis of one report and then sell on the basis of another report where there is a considerable spread between the two.

They all agreed that the forecast reports are not yet all that can be desired but feel that they have made some improvement over last year and that as they build up a background of historical data they will be able to give much more accurate forecast reports from year to year.

It is quite apparent from the foregoing that the December estimates must be far more accurate estimates of the crops than the forecast estimates. They are much more comprehensive, being based on a far greater number of returns—over ten times as many—and are obtained at a time when the crops are already harvested, while the forecast reports are secured during the time of harvest.

It is recognized by all those who have anything to do with the compiling of these reports that there is room for improvement in the forecast reports, but it must be kept in mind that the value of a forecast report to the trade depends upon its timeliness and those charged with getting out these reports must govern themselves accordingly. It would do no good to get out a forecast report on field seeds in December. While they strive for as great accuracy as possible, the forecast reports are not intended so much for arriving at an exact production figure—because that is impossible—as for giving as nearly as possible an indication of probable production as compared with average and the previous year.

There are many factors which can upset the forecast reports, the principal of which are abandonment of acreage intended to be cut for seed and yields turning out larger or smaller than anticipated. Then, too, it has been found that there is almost always a tendency prior to and at the time of harvest to under-estimate a large crop when it follows a smaller crop, and to overestimate a small crop when it follows a larger crop. This tendency is taken into consideration by statisticians in their interpretation of the data, otherwise there would be a far greater difference between forecast figures and final estimates than we have at present.

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### Grain & Feed Journals

CONSOLIDATED

332 South La Salle St., Chicago, Ill.

## Imports of Grass Seeds

Imports of forage plant seeds during February and during the 8 months prior to Mar. 1, compared with the like periods a year earlier, as reported by the U.S.D.A., have been as follows, in pounds:

	February		July 1 to Mar. 1	
	1940	1939	1939-40	1938-39
Alfalfa	819,900	440,300	2,499,900	2,081,400
Beans, Mung	2,900	.....	2,900	.....
Bentgrass	.....	95,100	121,200	100,500
Bluegrass, annual	.....	2,600	4,100	10,200
Bluegrass, Canada	3,900	2,800	17,700	9,600
Bluegrass, rough	36,600	90,400	767,100	596,600
Bluegrass, wood	.....	.....	2,900	3,900
Brome, smooth	422,600	312,100	2,649,100	1,747,000
Clover, alsike	61,700	200	436,000	7,100
Clover, crimson	.....	28,600	5,051,200	4,590,600
Clover, red	45,500	124,500	82,600	309,700
Clover, subter'n	.....	200	900	1,400
Clover, suckling	.....	2,200	34,700	51,900
Clover, white	34,400	154,600	640,900	1,955,100
Dogtail, crested	.....	1,100	11,700	1,400
Fescue, Chewings	6,500	17,600	748,700	563,500
Fescue, meadow	.....	.....	24,900	43,800
Fescue, other	18,100	91,300	106,300	250,300
Foxtail, meadow	.....	.....	100	.....
Grass, Bahia	200	.....	44,100	15,600
Grass, carpet	.....	.....	.....	12,400
Grass, Dallis	.....	5,600	80,700	133,600
Grass, Guinea	.....	.....	57,800	24,300
Grass, molasses	4,200	.....	46,200	2,200
Grass, orchard	43,900	9,900	248,600	1,726,400
Grass, rescue	.....	.....	200	47,900
Grass, Rhodes	.....	.....	88,400	62,400
Grass, velvet	.....	300	7,400	24,300
Kudzu	.....	.....	5,000	.....
Lupine	.....	6,400	.....	6,400
Medick, black	.....	6,600	107,200	59,100
Millet, Japanese	141,800	.....	666,700	.....
Mixtures, alfalfa and timothy	.....	.....	15,900	.....
Mixtures, alsike and timothy	.....	.....	34,300	38,700
Mixtures, alsike, tim'y & red clov.	.....	.....	.....	7,400
Mixtures, grass	7,300	.....	41,800	.....
Oat	494,900	.....	494,900	.....
Rape, winter	10,100	521,000	4,437,300	5,646,700
Ryegrass, Italian	1,500	1,300	292,200	19,100
Ryegrass, peren'l	53,000	119,700	601,800	417,800
Sourclover	.....	.....	35,000	.....
Sweetclover	104,300	900,000	3,288,900	8,262,500
Timothy	15,600	200	15,900	500
Vetch, common	.....	.....	249,000	881,700
Vetch, hairy	7,600	78,500	2,619,000	4,698,900
Vetch, purple	.....	.....	1,000	.....
Wheat	92,700	.....	92,700	.....
Wheatgrass, crested	67,800	59,700	964,000	315,600
Wheatgrass, slender	.....	11,500	30,800	76,700

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### GRAIN & FEED JOURNALS

Consolidated

332 So. La Salle Street CHICAGO, ILL.



## Grain Carriers

The first cargo of corn, Pekin to Chicago, this season, went thru the Peoria lock Mar. 22.

**Wichita, Kan.**—The Trans-Missouri-Kansas Shippers Advisory Board will meet here June 11.

**Washington, D. C.**—A bill has been introduced in the House providing for payment of tolls for passing thru locks on mid-west rivers.

**Chicago, Ill.**—A barge shipment of 40,000 bus. of wheat arrived Mar. 28, having left Kansas City Mar. 12. This No. 1 dark will move from the Chicago elevator by lake to an eastern mill.

Grain and grain products were loaded into 31,441 cars during the week ending Mar. 23, against 31,679 cars loaded during the like week of 1939, as reported by the Ass'n of American Railroads.

**New Orleans, La.**—The M., K. & T. R.R. Co. had a hearing Apr. 2 on its proposal to equalize with competing roads the export and coastwise rates on coarse grains and products thru New Orleans.

**Chicago, Ill.**—Rates from Chicago to St. Louis on 75 commodities in four classifications have been reduced by the railroads on lots of 5,000 lbs., 10,000 and 15,000, to compete with trucks, effective Apr. 3.

**New Orleans, La.**—The Illinois Central has been authorized by the Interstate Commerce Commission to make reductions up to 20 per cent in the export freight rate on grain from points in Illinois to New Orleans and Gulfport, Miss.

It is proposed to amend item 300-A of W.T.L. tariff 330-E by adding the following to Note 1: "When marked load limit of a car is less than five per cent in excess of marked capacity, minimum weight will be 95 per cent of the marked load limit."

**Portland, Ore.**—The Pacific Northwest Shippers Advisory Board meeting here Mar. 22 urged shippers not to load system cars off owners' lines, if it can be avoided. To load foreign cars to or via the owners or in the direction of the owners is provided by car service rules.

**Buffalo, N. Y.**—Traffic Commissioner W. E. Maloney of the Corn Exchange will appear at an I.C.C. hearing on the petition in Toledo as a spokesman for Buffalo interests. The rail rate on wheat moving from Buffalo to New York City will be 6 cents a bushel beginning Apr. 29.—G. E. T.

**Cairo, Ill.**—The first barge load of corn to ascend the Illinois river in the 1940 navigation season left here the third week in March. It carried 35,000 bus. Barges were being loaded with corn at Peoria, and Havana, Ill., the last week in March for billing to Chicago.—P. J. P.

Under private management the United States railroads have been having a difficult time to keep going. Under political management the economies effected by private management would be wiped out. Be not deceived; political qualification would weigh in appointment of railroad officials by government.—*Charleston News and Courier*.

The Welland Canal is scheduled to open Apr. 15, as usual, tho there has been no official announcement. The construction and repair gangs are busy getting the waterway ready for what promises to be a busy season. New boats will be put on the Great Lakes and others which have not been in use for some time are being fitted out for service in carrying grain for the warring nations.—G. E. T.

## Shipping Opposition to the Deep Waterway Project

[Excerpts from address by Capt. F. J. Davis, sec'y, Canadian Navigators Federation, before Society of Grain Elevator Superintendents.]

If this St. Lawrence Deep Waterway project be allowed to take form and the St. Lawrence is made navigable for 27 ft. draft, competition will again come into being. Visualize, if you will, the attitude of New York and Albany. Can you conceive of these centers of marine industry sitting quietly back and allowing foreign shipping to enter the Lakes through Canadian channels? Gentlemen, never think that, for either the New York State Barge Canal will be increased to corresponding dimensions or rail facilities will be made possible but trade via New York and Albany will not suffer irrespective of cost. Yet with this picture in mind ill-informed people advocate the St. Lawrence development and by so doing they also advocate another equally large system through the State of New York when we are at present equipped to handle all the grain and other commodities that can ever be produced unless the population of this country and the American West doubles, which is unlikely within the next century. In time of war, we have the question of defense and this should engage the minds of sane thinking people. A canal system of 14 ft. draft will allow but small foreign traders to enter the heart of our industrial centers and in view of the present conflict means of national defense should be paramount.

Picture a completed deep waterway today and a condition that would be frowned upon if certain foreign vessels made their way through our waters, while neutral and free to trade they may not be friendly and one small parcel of war powder could disorganize our shipping facilities for months. It is not an impossibility, unfortunately it would only be too probable and the larger the locks the longer and more costly the delay. And delays of this nature under the present war conditions could be extremely serious.

Thirty years have now elapsed since our Lower Canals were completed to a 14 ft. draft. That draft is sufficient for our needs. We have a type of ship designed for this draft that fits perfectly into this country's requirements.

It is our objective then, to segregate these two projects, eliminate the 27 ft channel idea entirely and improve our present Lower Canals to conform with the New York State Barge Canals. With this in mind our Association appointed a Deep Waterway Committee and last winter we put out a booklet entitled "The St. Lawrence Waterway Project" and it has been given quite a wide circulation. It is my ardent desire that closer working affiliations can be had with you gentlemen, the shipowners and all parties interested that this very much alive question will be handled satisfactorily to all. For without a united front among the marine

and affiliated interests the Governments of our day will eventually sponsor this project.

## Processing Tax a Heavy Burden on Consumer

By CLAUDIUS T. MURCHISON, of the Cotton Textile Institute

Agricultural legislation, once designed to provide the knowledge and the means to enable agriculture to help itself, now is concerned only with the farmer who signs on the dotted line and becomes a part of the machine. Government projects designed for emergency employment purposes threaten to become a fixture in the economic system for the beneficiaries regard their employment as a permanent vested right.

The huge government expenditures of the past few years, which have raised the public debt to approximately forty-five billion dollars, and which moved the Secretary of the Treasury to recommend an increase in the debt limit to fifty billion dollars, were not the result of any political plan.

THE WASTAGE OF FINANCIAL RESOURCES has been occasioned by high-pressure groups whose political affiliations are merely incidental to the purpose in hand.

The deficit method of spending largely from borrowed funds postpones the day of reckoning and the taxpayer will not feel the full burden until it is too late to act.

THE CERTIFICATE PLAN.—The Secretary of Agriculture has recommended to the Congress a certain program which, if carried into effect, would put a retail sales tax of perhaps 12 per cent on all cotton products.

Mr. Wallace's plan would require the mills to pay to the farmers the sum of approximately five cents a pound over and above the market price of the cotton. This would amount to approximately twenty-five dollars a bale, or \$175,000,000 which the mills would be required to pay to the farmers in addition to the sales price of the cotton.

A similar plan of requiring processors to make payment to farmers over and above the market price is being recommended for wheat, tobacco, rice, prunes and raisins. In all cases it would mean higher prices for the finished product, or shorter weight, or poorer qualities or substitutions. The aggregate impact on the American consumer would be great.

If this plan is put into effect and declared constitutional, it should quickly make obsolete our historic system of taxation. Thereafter, the government could more easily finance its operations, by dispensing with all the bother and expense of tax collections and resorting to the simple expedient of requiring certain individuals and groups to support other individuals and groups by purchasing slips of paper from them. What a grand way to obtain balance in our economic life with fair prices and ample income for all.

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by  
F. B. Morrison

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# Feedstuffs

Norway is reported to have set up a monopoly in the sale of fish livers thru granting of a royal decree to the Norwegian Raw Fish Ass'n, according to the American consulate at Bergen. Being sought are fixed prices and stabilization of the industry.

**Memphis, Tenn.**—The Com'te of the Memphis Merchants Exchange Clearing Ass'n charged with the duty of drafting the contract and trading rules for the soybean oil meal market to be inaugurated on the Memphis Merchants Exchange will submit its completed report to a general meeting of the Clearing Ass'n Apr. 12.

## Vitamin A Supplement in Dairy Feed

Vitamin A, as a supplement of grain mixed with fortified cod liver oil, was given to a large number of the heifers and milking cows of a mixed dairy herd, during 19 to 22 months, at the Massachusetts Agricultural Experiment Station. J. S. Archibald and C. H. Parsons report that the average daily intake of vitamin A was 142,000 I. U. by the cows receiving the unsupplemented ration and 174,000 I. U. by the experimental group.

Careful records of growth in young heifers and of reproductive function in heifers and cows showed no significant differences between the two groups, but the treated group showed a slight prolongation of lactation. There was no variation in butter fat content of the milk. The vitamin A content of the milk was increased, but the efficiency of utilization of the supplement was considered to be very poor.

## Selling Stressed in A.F.M.A. Convention Program

Salesmanship is stressed in the program being prepared for the annual convention of the American Feed Manufacturers Ass'n, which will be held at French Lick, Ind., May 23-24, according to announcement by President Ralph M. Field, Chicago.

Customer relations, "how to appeal to and get along with your customers," will be discussed by a lady who understands them thoroly.

Salesmanship, and sales practices, will be the subject of an authority in this field who knows feed selling as well as general selling.

"Vitamins on Parade," Allied Mills' feature color movie, will be shown.

Future trading in vegetable meals will be discussed by a representative of the Memphis Merchants Exchange.

J. Frampton King, president of the American Feed Control Officials, will be a featured speaker.

Nutrition will have its own spot on the program, following a different plan from preceding conventions. Nutrition will be the subject of a round table discussion during the afternoon of the first day, which will be led by Dr. L. A. Maynard, chief of the laboratory of animal nutrition at Cornell University. It will be a technical discussion to pass along latest developments in feed research.

Golf will be provided for those who do not attend the nutritional meeting, but those who do attend will have their chance at the annual tournament awards thru special arrangements being prepared by the program com'te.

## The Dog Food Industry

The importance of the dog food industry is shown by figures published by the Bureau of the Census of the United States Department of Commerce. These figures indicate that over 412,000,000 pounds of canned dog foods, having a production value in excess of \$20,000,000, were produced in 1937.

In order to meet the several state requirements as to labeling, standards, and compliance with regulations, the members of the Dog Food Division of the Institute of American Meat Packers adopted certain standards for quality products which are believed to be adequate for a complete and balanced diet for dogs.

These standards include: minimums of 10 per cent protein, 75 per cent of which is to be supplied by meat and meat by-products, and 2 per cent fat; maximum of 1.50 per cent fiber; a nutritive ratio of 2.0; a maximum of 3.50 per cent ash; and minimums of .25 per cent calcium and .30 per cent phosphorus.

In addition, adequate inspection is required, and the meat and meat by-product ingredients, together with the other ingredients, are required to be clean, wholesome and nutritious. —Dr. James W. Kellogg.

## Cottonseed Meal for Fattening Yearling Steers

In each of three feeding trials, extending over 168 days, four lots of yearling steers received concentrate rations of (1) ground kafir, plus a small amount of cottonseed meal, (2) a mixture of ground kafir and cottonseed meal 1:1, (3) cottonseed meal, and (4) cottonseed meal fed at a limited rate for the first half of the period and full-fed the latter half. Corn silage and alfalfa hay were fed to all lots.

The average daily gains per steer were 2.18, 2.31, 2.34, and 2.09 lb., the average feed cost per 100 lb. of gain \$10.13, \$10.07, \$9.83, and \$9.68, and the average profit per head above initial cost plus feed and market costs were \$13.55, \$13.16, \$14.88, and \$14.66 for groups 1 to 4 respectively. Steers, full-fed cottonseed meal throughout the period consumed an average of 9.51 lb. per head daily or 405.2 lb. per hundred weight of gain, and developed into choice fat animals with no evidence of nutritive deficiency symptoms under this feeding plan.

Steers fed large amounts of silage the first half of the period with heavy feeding of cottonseed meal deferred until the latter part produced economical gains but not so much finish as other rations. All the rations gave satisfactory returns, so that the choice of the one to use should be governed primarily by the comparative costs of kafir, cottonseed meal, and silage.—New Mexico Station Bulletin 262.

## Feedstuffs Movement in March

Receipts and shipments of millfeeds at the various markets during March, compared with March, 1939, in tons, were:

	Receipts		Shipments	
	1940	1939	1940	1939
Baltimore	3,214	4,240	.....	.....
Boston	308	243	.....	50
Chicago	12,328	13,893	44,674	47,996
Kansas City	2,706	5,475	23,525	25,950
Milwaukee	230	60	15,560	7,360
Minneapolis	.....	.....	35,025	.....
Peoria	9,780	.....	15,520	15,000



## Method of Calculating Mixtures

Because of changes in prices of feeds from time to time, decided savings may be made occasionally by changing the grain mixture to take advantage of the cheaper feeds. It will pay dairy farmers, therefore, to give special thought to relative prices of feeds.

**COMPUTING COST OF TOTAL PROTEIN.**—A good basis for selecting the most economical protein supplement at existing prices is to compare the costs of 100 pounds of total protein in the various feeds available.

*Example:* When soybean oilmeal sells at \$1.90 per cwt. and corn gluten feed sells at \$1.25, which is the more economical source of protein?

Price of soybean oilmeal.....\$1.90 per cwt.  
Total protein in 100 lb.....41 lb.

$\frac{\$1.90}{41} \times 100 = \$4.63$ , the cost of 100 pounds of protein

Price of corn gluten feed.....\$1.25 per cwt.  
Total protein in 100 lb.....25 lb.

$\frac{\$1.25}{25} \times 100 = \$5.00$ , the cost of 100 pounds of total protein

Soybean oilmeal at \$1.90 per 100 pounds is thus a slightly cheaper source of protein than corn gluten feed at \$1.25 per 100 pounds.

**COMPUTING PERCENTAGE OF TOTAL PROTEIN.**—Successful feeding of grain mixtures depends in large part on the ability of the feeder to judge the quality of the roughage fed and then to make up a grain mixture which will properly supplement that particular kind and quality of roughage.

Corn-and-cob meal and oats will not make a mixture containing 15 per cent total protein, for corn-and-cob meal contains only 8 per cent total protein and oats only 12 per cent. Therefore a feed or feeds with higher percentage of protein must be added to the corn and oats. Suppose soybean oilmeal and wheat bran are added to the mixture in the following proportions:

Feed	Amount of feed (lb.)	Total protein— In 100 lb. of feed	
		In amount of feed in mixture (lb.)	In amount of feed used (lb.)
Corn-and-cob meal	300	8	24
Ground oats	200	12	24
Wheat bran	200	15	30
Soybean oilmeal	50	41	20.5
	750		98.5

$\frac{98.5}{750} \times 100 = 13.1$ , the percentage of total protein in the mixture.

In order to raise the percentage of protein in the mixture to about 15 per cent, more soybean oilmeal should be added. When the amount of oilmeal is increased to 100 pounds, the mixture then weighs 800 pounds and contains 119 pounds of total protein.

$\frac{119}{800} \times 100 = 14.9$  per cent total protein

This meets the requirements satisfactorily, as a supplement to the medium-quality part-legume roughage.

**COMPUTING THE COST OF THE MIXTURE.**—The cost of the mixture per ton may readily be computed according to the prevailing prices of the feeds.

If the prices were: ear corn, 56 cents a bushel; oats, 42 cents a bushel; wheat bran, \$28 a ton; soybean oilmeal, \$38 a ton, the cost of the mixture would be as follows:

Ear corn:  $\$.56 \div 70$  (lb. per bu.)  $\times 300$ ...\$2.40  
Oats:  $\$.42 \div 32$  (lb. per bu.)  $\times 200$ ...2.62  
Wheat bran:  $\$28 \div 2000$  (lb. per ton)  $\times 200$  2.80  
Soybean oilmeal:  $\$38 \div 2000$  (lb. per ton)  $\times 100$  1.90  
Grinding 500 lb. corn and oats @ 10c per cwt. .50

Total cost for 800 lb. of mixture.....\$10.22

$\frac{\$10.22}{800} \times 2000 = \$25.55$ , the cost per ton

—Illinois Circular 502.

## Hay Movement in March

Receipts and shipments of hay at the various markets during March, compared with March, 1939, in tons, were:

	Receipts		Shipments	
	1940	1939	1940	1939
Boston	297	385	.....	32
Chicago	2,114	1,553	691	708
Kansas City	1,416	1,968	528	60
St. Louis	84	36	60	60

## Feed Prices

The following table shows the closing bid price each week for May futures of standard bran and gray shorts, spot cottonseed meal and No. 1 fine ground alfalfa meal, in dollars per ton, and No. 2 yellow corn and No. 2 yellow soy beans in cents per bushel:

	Minneapolis Spot		Kansas City	
	Bran	Midds	Bran	Shorts
Jan. 13.....	21.00	21.00	18.85	22.80
Jan. 20.....	21.00	21.00	18.75	22.75
Jan. 27.....	21.00	20.50	18.25	22.40
Feb. 3.....	20.50	19.50	17.90	21.60
Feb. 10.....	20.75	20.25	17.95	22.20
Feb. 17.....	21.50	21.50	18.75	22.70
Feb. 24.....	22.50	21.50	18.50	22.40
Mar. 2.....	21.50	20.75	18.10	22.25
Mar. 9.....	22.50	21.50	18.50	22.35
Mar. 16.....	23.00	21.50	18.20	22.10
Mar. 23.....	23.00	22.00	18.45	22.50
Mar. 30.....	23.50	23.00	19.15	23.25
Apr. 6.....	23.50	23.50	19.50	23.10

	*St. Louis		Chicago	
	Bran	Shorts	Soybeans	Meal
Jan. 13.....	21.65	24.50	117	34.20
Jan. 20.....	21.80	24.25	112¾	31.50
Jan. 27.....	21.40	24.25	108½	31.20
Feb. 3.....	21.00	23.65	104¾	31.20
Feb. 10.....	21.10	24.50	106¾	29.20
Feb. 17.....	21.50	24.85	108	29.20
Feb. 24.....	21.40	24.40	110½	29.20
Mar. 2.....	21.25	24.25	113¾	29.20
Mar. 9.....	21.50	24.40	118½	31.20
Mar. 16.....	21.20	24.00	111½	29.20
Mar. 23.....	21.45	24.50	112	29.20
Mar. 30.....	22.10	25.00	110½	29.20
Apr. 6.....	22.50	24.75	106¾	29.20

	Cottonseed Meal		Kansas City		Chicago	
	Ft. Worth	Memphis	Alfalfa	City	Corn	
Jan. 13.....	37.00	30.50	23.50	59		
Jan. 20.....	37.00	30.50	23.25	60		
Jan. 27.....	37.00	30.00	23.50	59		
Feb. 3.....	37.00	30.00	23.50	57		
Feb. 10.....	37.00	29.00	23.50	58½		
Feb. 17.....	37.00	29.50	23.50	58		
Feb. 24.....	37.00	30.25	23.50	58¼		
Mar. 2.....	37.00	30.50	23.50	58¼		
Mar. 9.....	37.00	30.50	23.25	58¾		
Mar. 16.....	37.00	28.90	23.25	57¾		
Mar. 23.....	37.00	30.20	23.25	59		
Mar. 30.....	37.00	30.50	23.25	58		
Apr. 6.....	37.00	30.50	23.25	59¾		

\*St. Louis bran, basis Chicago delivery, shorts St. Louis delivery.



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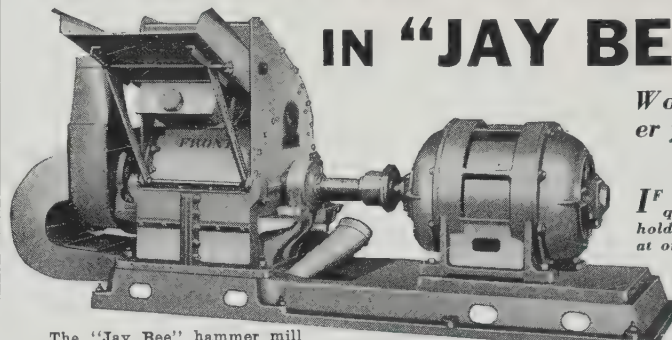
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# Poultry Feeds and Feeding

## Protein Level and Chick Growth

Continuing a series of studies, two rations containing 16 and 22 per cent of protein, respectively, were fed by the Nebraska Agricultural Experiment Station to newly hatched chicks in two series of feeding trials. The chicks on the 22 per cent protein ration made greater gains on the same dry matter intake over the same period of time and showed a higher percentage of N in the gain than those on the 16 per cent ration.

Chicks on the 16 per cent level, however, showed a higher ratio of gain in weight to N fed and retained a higher percentage of N fed. Only slight differences occurred in the percentage retentions of Ca and P. The dilution of the 22 per cent protein ration with 30 per cent of starch to give a 16 per cent ration resulted in definite evidence of depraved appetite, including feather picking and coprophagy, and also gave poor feathering.

## Cereals in Fattening Ration

For fattening Leghorn broilers W. A. and A. J. G. Maw tried corn, wheat, whole oats, hull-less oats, whole barley, and hull-less barley, each in ground form and supplemented with animal protein, in 14-day fattening trials with white Leghorn broilers. The length of the feeding period affected the gains made on various rations.

The corn, wheat, and barley rations were most efficient over the 14-day period. Corn produced the largest amount of fat in the carcass, but the ration had no significant effect upon the distribution of fat in the edible portion.

Groups of mature Rhode Island Red roosters were fattened for 21 days with the ground cereals, corn, wheat, oats, and barley respectively, by W. A. and A. J. G. Maw and R. Holcomb. Each grain was supplemented with animal protein only. The wheat- and oat-fed groups gained more rapidly during the early days of the period. Over the entire period, however, the corn-fed group made the best gains, followed in order by the wheat-, barley-, and oat-fed groups. The corn-fed group showed the largest amount of total fat in the edible portion of the carcass, while the oat- and barley-fed groups were lowest in this respect. Considerable differences existed in the distribution of fat between the skin, flesh and abdominal fat for the various groups.

## Agrees to Discontinue Misrepresentations

The Federal Trade Commission has accepted from J. Kendley Martin, trading as Standard Milling Co., 46 Fairlie St., Atlanta, Ga., a stipulation to discontinue misleading representations in the sale of poultry, dairy and hog feeds.

Among representations which the respondent agrees to discontinue are that any of his feeds are perfectly balanced or incorporate every new feeding discovery of value in a poultry or livestock ration; that every ingredient in the respondent's "Super Quality Starting Mash" is completely assimilated; that this mash is potentially fortified with all the known vitamins; that the minerals present in "Super Quality Supplement Mash" are completely water soluble; that "Super Quality Growing Mash" provides in ample amounts every known vitamin; that "Super Quality Pullet Mash" will prevent the possibility of neck moults or premature production, and that "Super Quality Starting Mash" will afford the lowest mortality rate, or that any of the respondent's hog feeds will afford the highest profit, will grow and develop swine at the lowest feeding cost, put on most weight or grow and develop swine in the shortest time or with the smallest amount of feed.

## Determining Gross Value of Protein Concentrates

The Washington State Agricultural Station reports a method for measuring with chicks, the gross value of protein supplements. The chicks were first subjected to a depletion period on a diet containing eight per cent protein from cereal sources (except for the vitamin-G complex supplement). They were then standardized as to body weight and duplicate groups were given the experimental diet containing three per cent of protein from the supplement. The increase in body weight of chicks on the experimental diets over the chicks receiving the negative control diet was used as a measure of the gross protein value. The values obtained were compared with that observed after feeding casein, which was arbitrarily given a value of 100.

In experiment I a sample of Manchurian hydraulic process soybean oil meal was compared with a sample of commercial lactic acid precipitated casein. Giving casein a value of 100, the soybean oil meal had a value of 58.5. In experiment II, the same ingredients were checked by a carefully controlled growth method that more nearly simulated common feeding practice. In this experiment the value of soybean oil meal was 56.3.

Experiment III was a demonstration of the method of obtaining the gross protein value on herring fish meals A and B, dried skim-milk, alfalfa leaves (10 in. plants), alfalfa leaves (24 in. plants), and alfalfa hay (10 in. plants). The values obtained were 105, 93, 88, 13, 5, and 14, respectively.

## Gain in Weight and Gain in Energy Content

G. S. Fraps and E. C. Carlyle of the Texas Agri. Exp. Station determined in six series of experiments the fat and energy content of chicks fed rations in which the feed tested replaced corn meal. The fat content of the chicks ranged from a minimum of 2.02 per cent to a maximum of 12.02 per cent and the energy content from 144 to 225 calories per 100 gm. The energy content per gram of live weight was different for the different rations.

The relative quantity of feed required per gram of gain in live weight was different from the relative quantity required per calorie of gain. In one experiment the chicks on a casein ration required practically the same quantity of feed as those on a corn-meal ration per unit of gain in live weight, but they required 47 per cent more per calorie of gain.

Chicks fed a ration in which 15 per cent of Wesson oil replaced 15 per cent of corn meal required in two experiments 11 or 13 per cent more feed to produce the same gain in live weight as the corn-meal ration, although the Wesson-oil ration should have a higher productive energy. They required 5 to 16 per cent less of the Wesson-oil ration to produce the same calories of gain, which is in accord with the higher productive energy.

Feed required per unit of gain in live weight is not a safe standard for comparing the feeding values of rations, tho it may be a good practical one, especially for animals sold on a weight basis. In scientific work, the fact that

equal gains in live weight do not necessarily mean equal gains in energy should not be overlooked.

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## Soybean Meal for Growing Chicks

By J. G. HALPIN, Wisconsin College of Agriculture, before American Soybean Ass'n

We get a good many letters asking for information about feeding soybeans to poultry. Twenty-five years ago we reported that baked soybeans gave better egg production than raw soybeans. The beans were baked daily and fed mixed with mash. The raw beans were ground and mixed with the mash for the second group.

Osborne and Mendel (1917) and Vestal and Shrewsbury (1932) reported that cooking the soybeans caused a very significant increase in its growth promoting properties for white rats. Hayward, Steenbock and Bohstedt (1936) found in experiments with rats that heating the soybean to medium and high temperature in the commercial methods of oil extraction practically doubles the nutritive value of the protein (grams of growth per gram of protein eaten). Raw bean tasting soybean oil meal prepared at a low temperature gave about the same nutritive value for the protein as raw soybeans.

Hayward, Halpin, Holmes, Bohstedt and Hart (1937) reported feeding trials with growing chicks and laying pullets. In these trials soybean oil meals rendered at different temperatures and raw soybeans were substituted for a part of the milk and meat scrap in the Wisconsin No. 2 chick mash. In these trials, when 14 pounds of ground raw soybeans were substituted for six pounds of meat scrap and six pounds of dried milk in the chick ration, very slow growth was experienced. The chicks on the Wisconsin No. 2 (eight pounds of meat scrap and eight pounds of dried milk) averaged to weigh 658 grams at eight weeks while the raw soybean group (fourteen pounds raw soybeans, two pounds of dried milk and two pounds of meat scraps) weighed only 278 grams each.

On the other hand a ration made using an expeller soybean oil meal (Exp. S.B.O.M.—140 degrees-150 degrees, 2½ minutes) twelve pounds; meat scrap, two pounds; and dried milk, two pounds; averaged to weigh 560 grams at eight weeks. That is, slightly twice as heavy as the raw soybean group.

The following table showing weight of chicks in grams is taken from a series of trials in 1937:

Table I—Supplemental Value of Certain "High Protein" Feeds

Ration		Weight in Grams			
		Initial	2 Wks.	4 Wks.	6 Wks.
Basal	84				
Dried Milk	8	41.6	112	253	432
Meat Scrap	8				640
Basal	84	42.1	100	206	336
Soybean Oil Meal	16				531
Basal	84				
Soybean Oil Meal	13	41.8	107	232	382
Dried Milk	3				566
Basal	84				
Soybean Oil Meal	11	41.4	94	205	352
Linseed Meal	5				515
Basal	84				
Soybean Oil Meal	11	41.6	77	182	333
Gluten Meal	5				520
Basal	85				
Soybean Oil Meal	12	41.7	103	244	421
Fish Meal	3				647
Basal	85				
Soybean Oil Meal	12	41.9	99.2	217	372
Meat Scrap	3				547

Chicks used were Single Comb White Leg-horns—50 chicks in each lot.

In another trial when low temperature expeller soybean oil meal (105 degrees C.-2 minutes) was substituted for the meat scrap and dried milk, unsatisfactory growth was experienced (281 grams at eight weeks) but when high temperature expeller meal (140 degrees to 150 degrees C.-2½ minutes) was used the

chicks were decidedly better (468 grams at eight weeks) but not equal to the positive control (eight pounds of meat scrap and eight pounds of dried milk) as this lot averaged to weigh 684 grams in eight weeks.

In another trial using four pounds of meat scrap, four pounds of dried milk and eight pounds of high temperature soybean oil meal, we produced 533 gram chicks at eight weeks and 1660 gram pullets at twenty weeks. While a ration containing two pounds of meat scrap, two pounds of dried milk and twelve pounds of high temperature expeller soybean oil meal produced 518 gram chicks at eight weeks and 1578 gram pullets at twenty weeks. These chicks compared favorably with the positive control (eight pounds of dried milk and eight pounds of meat scrap) that weighed 616 grams at eight weeks and pullets that weighed 1668 grams at twenty weeks.

Numerous trials then have shown that a good sample of high temperature soybean oil meal can be used to replace all or a part of the dried

milk and meat scrap in a chick starter mash. When soybean oil meal is used to replace all of the animal protein, slightly slower growth is experienced but very satisfactory pullets can be produced.

That milk, meat and fish products contain some growth promoting factors not contained in soybean oil meal has been shown in a number of trials.

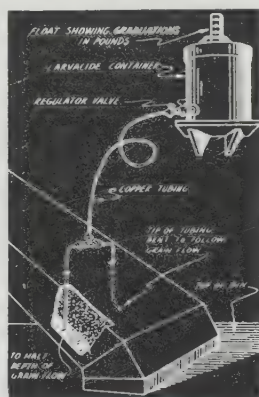
Milk, fish meal and meat scrap have shown in a number of trials to increase the growth rate when substituted into the soybean oil meal ration. On the other hand linseed meal and gluten meal addition have not improved the ration. In fact 16 pounds of soybean oil meal has been found to be superior to combination of the soybean meal with either linseed meal or corn gluten meal. Special feeds such as liver meal have given splendid results in some trials. In the 1936 trials a combination of soybean oil meal, 13; dried milk, 2; and liver meal, 1; gave chicks that averaged 642 grams at eight weeks compared with chicks on Wis-

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methods. LARVACIDE is applied to the incoming grain stream by the aluminum applicator or home-made funnel pipe methods shown below. Neither method calls for expensive apparatus. Bin Tops are easily treated, as for Moth, by use of Sprinkler Bottle with perforated cork.

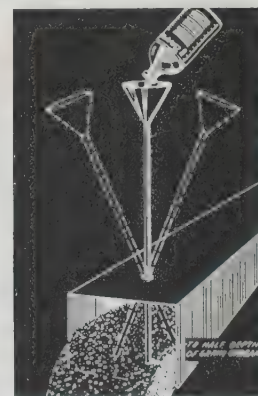


The aluminum applicator introduces required amount of LARVACIDE into grain stream by opening regulator valve at intervals as instructed.

**REPELS RODENTS**—Country Elevators particularly, will appreciate how the use of LARVACIDE for insect control, also repels rodents.

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consin No. 2 that weighed 608 grams and 531 grams for chicks on the soybean oil meal.

Increasing the amount of soybean oil meal to raise the protein level has not given satisfactory results. For instance in 1939 a group of Single Comb White Leghorn chicks getting expeller soybean oil meal in the amount of sixteen pounds, averaged 398 grams at eight weeks. A similar group getting twenty pounds of the soybean oil meal averaged 399 grams and a third group getting twenty-four pounds of soybean oil meal averaged almost the same 410 grams. In the same series, chicks getting eight pounds of meat scrap and eight pounds of dried milk averaged 607 grams and chicks getting Wisconsin No. 44 (four pounds each of dried milk, meat scrap, fish meal and soybean oil meal) averaged 646 grams at eight weeks.

In the second trial the group getting sixteen pounds of soybean oil meal averaged 386 grams; the group getting twenty-four pounds of soybean oil meal averaged 388 grams; and the group getting twenty pounds of soybean oil meal averaged 380 grams while the lot on Wisconsin No. 2 averaged 492 grams. Those on Wisconsin No. 44 averaged 520 grams. That additional protein of the right kind will result

in faster growth is shown by the lot getting Wisconsin No. 45 which averaged to weigh 623 grams at eight weeks.

For practical conditions, Wisconsin No. 44, containing four per cent of good quality soybean oil meal seems to be a very desirable combination for general farm use. When broilers are produced, Wisconsin No. 45 containing five per cent each of dried milk, meat scrap, fish meal and soybean oil meal, appears to be satisfactory. Adding still more protein, that is six pounds each of dried milk, meat scrap, fish meal and soybean oil meal, results in still slightly faster growth for the first eight or ten weeks.

That adding soybean oil meal to the Wisconsin No. 2 ration would increase the speed of growth was shown by replacing sixteen pounds of the basal (corn, bran, etc.) in the Wisconsin No. 2 chick starter by using soybean oil meal. In that case the chicks on the Wisconsin No. 2 weighed 616 grams at eight weeks while the chicks getting the soybean oil meal addition weighed 688 grams. This latter group was still heavier than the control at twenty weeks (Control—1668 grams—Soybean oil meal addition—1771 grams).

## Oat Mill Feed in Rations for Work Horses

The chemical composition of oat mill feed is much like that of timothy hay. The analysis suggests that, like timothy hay, oat mill feed might be suitable horse feed.

**OAT MILL FEED ALONE**—Two preliminary experiments with the horses of the Kennedy-Mansfield Dairy Company of Madison, indicated that horses at light to medium work could thrive very well, at least for a period of three months, on a ration containing little more than oat mill feed. A mixture of oat mill feed and molasses (sugared oat mill feed) kept one group of horses in slightly better condition of flesh than did good quality grass hay. One horse was kept on a ration of oat mill feed and molasses, with salt, exclusively, for a period of about six months.

At Monona Farms, three and subsequently four teams of work horses with the horses varying from 4 to about 20 years of age, were divided into two lots. Team mates were in opposite lots, one lot being fed oat mill feed, supplemented only with salt. On the supposition that even mature horses such as this might need certain nutrients that are contained in hay, the horses of the other lot, therefore the team mates, were fed oat mill feed and alfalfa meal in the proportion of 9 to 1. If the oat mill feed alone should not prove adequate in the long run, it was thought the 10 per cent of alfalfa meal might prevent a nutritional deficiency.

The horses of both lots were given salt regularly and water was available to each horse in an individual drinking bowl in the stall. Since oat mill feed is finely ground, somewhat dusty and absorbs the liquid saliva rather quickly, it seemed that free access to water might be important. It was later found that the effect of the rations was not affected by the method of watering. When water was shut off from the individual drinking bowls and the horses were watered three times daily at watering troughs, they got along apparently as well as previously.

**WITH ALFALFA MEAL**—When the above rations had been used for a period of three years without sign of nutritional failure some further experimentation was carried on

with the horses on the oat mill feed-alfalfa meal mixture, the other horses being continued as before on their exclusive ration of oat mill feed. The table shows the data of the horses during an uninterrupted period of four years and eight months on oat mill feed alone. Subsequently these horses were used on digestion trials with oat mill feed for testing methods of watering while on an oat mill feed ration, the entire time for two of the horses on an exclusively oat mill feed ration amounting to five years and eight months.

While the horses were not called upon for long continued heavy field work such as plowing, which was done by tractors, but were used for such work as hauling manure, hauling corn for silage from field to barn, planting corn and cultivating corn, they well maintained their vitality and live weights during these years. They were never during this time turned out on pasture.

During the early part of the experiment until prevented from doing so, the horses chewed their mangers, probably due to being changed to a less bulky ration which could be quickly eaten. During the entire experiment none of the horses gave indications of a perverted appetite. The horses were always checked while working, but they were not muzzled. They showed no irresistible impulse to graze. At the end of the experiment an examination of the horses by a veterinarian and a study of the calcium, phosphorus and hemoglobin content of their blood, revealed nothing unusual. Horses which for 17 months had been fed ground oat hulls instead of oat mill feed, and one horse on the oat mill feed ration, were in a thin condition of flesh. Several of the horses were by this time 15 or more years of age, which in part accounted for the difficulty of keeping them in good flesh.

**REPLACING PART OR ALL OF THE TIMOTHY HAY**—University horses at medium to hard work were during these years used for feeding tests, comparing oat mill feed or the mixture of oat mill feed 85 per cent and cane molasses 15 per cent, with a good grade of timothy hay. The single reversal plan of feeding was used, where team mates were in opposite lots, to equalize the amount of work done, and where the horses were

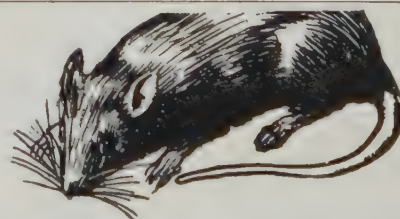
reversed on their rations after a given period of time, in one case 70 days and in another 126 days.

Where oat mill feed replaced one-half of the timothy hay in a ration of oats and timothy hay, or where the oat mill feed-molasses mixture replaced all of the timothy hay in such a ration, or where in still another experiment flaked oat mill feed replaced all of the timothy hay, the horses maintained their live weights about equally well. On the feed replacement basis both oat mill feed and the oat mill feed 85 per cent and molasses 15 per cent mixture were found worth the same as timothy hay.

The flaking process which was tried out applied pressure and friction upon unground oat mill feed, reducing its dustiness, but resulting in a coarse, flaky product, the flakes being from one-half to one inch square and about one-sixteenth inch thick.

**VALUE OF OAT MILL FEED IN WORK HORSE RATIOMS**—Farm horses at light to medium hard work maintained health, weight, and thrift on a ration of oat mill feed, fed continuously for more than five years. In shorter feeding trials oat mill feed successfully replaced half of the timothy hay in rations of horses at hard work. Where in other and similar experiments all of the timothy hay in rations of such horses was replaced by (flaked instead of ground) oat mill feed, or by the oat mill feed 85 per cent and molasses 15 per cent mixture, the results as to work and live weights were comparable to those on timothy hay. Oat mill feed in these work horse experiments proved to be worth about the same as a good grade of timothy hay.—Wisconsin Bulletin 441.

\*\*\*\*\*  
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### Feeding Trial with Horses, Monona Farm

These horses were on an exclusively oat mill feed ration during several years, while their team mates, not mentioned in this table, were fed other but similar rations.

Period and ration	Number of horses	Length of time (yrs.)	Average weight (lbs.)	Average daily gain (lbs.)	Average daily amount of oat mill feed eaten (lbs.)	Average daily hours of medium-hard work (hrs.)
Mar. 4, 1930, to Oct. 30, 1934....	3.6 <sup>1</sup>	4.7	1670	— .03	46.0	3.7

<sup>1</sup>There were three teams during first two months, two teams during next nine months, and four teams thereafter. Only one horse of each of these teams was on the ration consisting of oat mill feed, salt, and water.



## The Widening Market for Soybean Oil Meal

By LYMAN PECK, Soybean Nutritional Research Council, Ft. Wayne, Ind., at National Farm Chemurgic Conference, Chicago.

Surely during the last century no other agricultural crop has developed so rapidly, none has received so much publicity in so short a time as this oriental immigrant, the soybean.

Possibly the chemurgic movement has had considerable influence upon this publicity. It may be that this crop has been over-publicized both for the farmer's good and the good of the industry processing it. Unguided enthusiasm which disregards known facts of science has always proved a boomerang.

The soybean industry is still suffering from ill-advised enthusiastic statements made years ago regarding the feeding value of whole or ground raw soybeans. This same misguided enthusiasm has caused some to jump into the processing field without a careful investigation of the responsibilities both chemical and technical which are incumbent upon the processor's operations. There is no royal road to success via the soybean route any more than there is by any other one agricultural product.

Soybeans, like any other crop, have to be grown, processed, and marketed. The more intelligently all these are planned and carried out, the more profit to everyone concerned. Roughly speaking, the soybean crop affords two marketable products—soybean oil meal and soybean oil. What the future holds for the processing industry depends upon the intelligence with which these products are put into consumption.

Merely buying beans and processing them is not enough. Accurate control, both chemical and mechanical, is necessary at every step in processing in order to assure the consumers that the oil and the meal they purchase are suitable for the purposes for which they are to be used. If this industry prospers, it is necessary that the feeder receives uniform meal of the highest nutritive value. The day has already passed when all soybean oil meals are considered to be of equal value.

Much has been written and said about the merits of the different methods of processing. The facts are that the amount of heat used and the length of time it is applied have more influence upon the nutritional value of the meal than the particular method of processing employed.

THE ANNUAL PRODUCTION of soybean oil meal in the United States has increased from 21,000 tons in 1928 to over 1,000,000 tons last year. Indications are that this season will show a decided gain over the last one. My purpose during the next few minutes will be to review the reasons for this extraordinary development.

Any new agricultural crop under present farming conditions should:

Afford the farmer a better rotation, increasing the yield of the crop that follows. Tests prove that soybeans do this, and in addition are an excellent fertilizer when plowed under.

Fit into the deficiencies of other crops. In case of a failure or partial failure of other forage crops, soybeans furnish an excellent hay crop when cut at the proper time.

Present opportunities for a cash crop. Farming is, after all, a business requiring cash crops as well as those that may be converted into meat, milk and eggs, and sold as such.

Fit into a farm chemurgic program.

Because soybeans have met these conditions so satisfactorily, growers have greatly increased the acreage devoted to them. Processing facilities have kept pace with increased production providing a steady market for the beans.

Approximately 90-95 per cent of the soybean oil meal produced in this country at present finds its way into the rations for livestock and poultry and small animals. The real reasons for the acceptance of soybean oil meal

by feeders may be summed up by two words: Research and extension.

RESEARCH—From the agricultural experiment stations and colleges, especially during the past ten years, there has come an ever-increasing flood of experimental data proving the advantages of soybean oil meal as a protein supplement in the rations of livestock and poultry. These data indicate that it is equal or superior to, linseed or cottonseed oil meals, meat scraps, and tankage when properly supplemented with minerals, and in the case of poultry, sufficient vitamin G. We must not overlook the fact, however, that best results particularly with poultry and swine are obtained when soybean oil meal is used in combination with animal proteins instead of replacing them entirely.

The research work at Wisconsin and at Cornell involving the effect of heat during processing has had a most significant effect, because it has enabled processors to know how to govern their operations to produce meal of the highest nutritive value. The larger processors with adequate laboratory facilities and an efficient personnel were quick to apply this information. As a result the feeding value and uniformity of their meals is much superior to what it was a few years ago.

It would be unfair to the processors of soybeans to mention this research at our agricultural experiment stations and colleges without stating that quite a lot of this research has been made possible by funds which the processors provided for this purpose.

This sponsoring of research by industry has had a two-fold effect. In the first place, it brought forth unbiased factual data which is the only firm foundation upon which to build a business, whether it be processing soybeans or feeding livestock. In addition, it has brought about a better relationship between the research workers in our agricultural institutions and industries. Working together in a common cause both groups have become better acquainted and as a result have a broader view of the whole problem and a better appreciation of each other.

EXTENSION—After research has uncovered basic facts, the practical problem is to get these facts before the ultimate consumer.

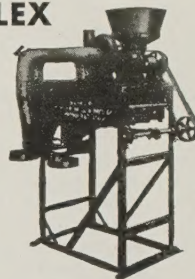
About two years ago the National Soybean Processors Ass'n formed a group known as the Soybean Nutritional Research Council. This council is at present composed of seven technical men from different processors whose main purpose is to study experimental data,

contact the research workers at various agricultural experiment stations and colleges and assist them by exchanging ideas and data.

The other activities of the Council are directed toward extension work. A literature review of the experimental data concerning soybean oil meal was prepared and widely distrib-

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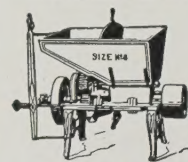
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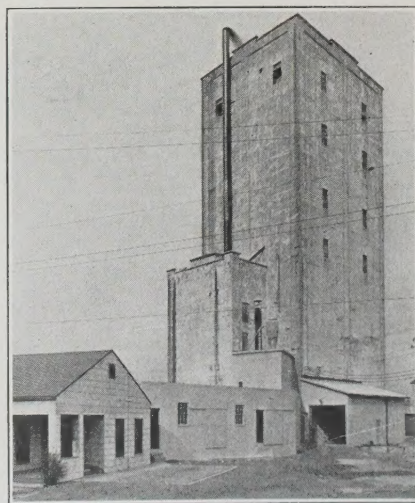
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uted among research workers and teachers. Popular articles on the feeding value of soybean oil meal were prepared, carefully checked for accuracy, and then released thru the agricultural press over all this country. Some of these articles were combined in a booklet which has been widely distributed to feeders. In this distribution they have been materially aided by the agricultural extension departments of the railroads, county agent, Vo-Ag, teachers in high schools, the field men of commercial feed manufacturers, and many other agencies. Exhibits have also been prepared and shown at various large shows attended by farmers.

One of the main reasons why the Soybean Nutritional Research Council has been so successful is because all the members drop their commercial affiliations while engaged in this work and, regardless of the fact that they are all competitors, work shoulder to shoulder in a common cause—advancing the knowledge of soybean oil meal.

Now let us consider where the balance of the soybean oil meal finds a market. Industrial research is developing new uses every day. There is considerable advance in the field of plastics. Glue and sizing for washable wallpaper, water paint, and other uses find soybean protein valuable. Last, but by no means least, is the rapidly increasing use of soybean flour and other byproducts in the human edible field.

## Effect of Process on Dry Milk

K. M. Henry and others, in the Journal of Dairy Research, report studies of the nutritive value of samples of the same batch of milk spray dried by the Kestner process, roller dried, and evaporated. The digestibility and biological value of the proteins, the vitamin B<sub>1</sub> content and the growth promoting properties of the processed milks were estimated biologically. Vitamin A, carotene, riboflavin and vitamin C were estimated chemically and physically in both the raw and processed milks.

No difference was found in the biological value of the proteins in the three milks, but the proteins of the evaporated milk were less

digestible than those of the spray dried milk. Little or no loss of vitamin B<sub>1</sub> activity occurred on drying, but the evaporated milk had only about half the vitamin B<sub>1</sub> potency of either of the dried milks. A comparison of the growth promoting properties of the milks when, supplemented with minerals, they formed the sole diet of young rats showed no difference in growth response, but the intake of evaporated milk was greater than that of either of the dried milks and, when the results were calculated as gain in weight per 100 ml. milk intake, the evaporated milk was less good than the dried milks. This difference was found to be statistically significant.

Vitamin A, carotene and riboflavin in the milks were not affected by any of the treatments nor was there any loss on storage for a year in the case of vitamin A and carotene, or for 16 months in the case of riboflavin.

A loss of 20 per cent vitamin C was found for spray dried milk and of 30 per cent for the roller dried and evaporated milks. Gradual loss of vitamin C took place on storage in the evaporated milk but only a slight loss was found after a year in the dried milks.

## Changes in Feed

By RAY EWING

Modern methods of manufacture are changing the nature of some feeds. A ration that contains degerminated cereals or cereal by-products may be deficient in vitamins, whereas the same feed mixture with regular products would supply plenty.

Animal by-products are variable, depending upon the nature of the raw material and the process of manufacture. The method of curing any feed and the conditions of temperature and oxidation which it is subjected to will affect the feeding value.

The more intensive the manufacturing process the greater the likelihood of destruction of some factor, whether it be amino acids or vitamins or some other factor. But the important point is that these changes which are changing the feeding value of products often cannot be detected by analysis or inspection. Neither does the average feeder know or realize that the nature of many feeds is changing.

Since the beginning of the century there have been many changes or developments. These have dealt with the feeds themselves, methods of feeding practices, equipment, mash feeding, cafeteria systems, all-mash rations, pellets, cooking, predigesting and scores of other practices.

## Imports and Exports of Feeds

Imports and exports of feedstuffs during January, and for 6 mos. ending December, 1939, compared with the same periods a year earlier, as reported by the Bureau of Foreign and Domestic Commerce, were as follows, in tons of 2,240 lbs. except where otherwise noted:

	IMPORTS		6 mos. ended December	
	January 1940	1939	1939	1938
Hay*	7,424	4,460	25,703	7,758
Coconut cake†	7,355,309	12,009,519	54,821,526	47,876,893
Soybean cake†	51,900	2,301,797	8,606,441	7,983,421
Cottonseed cake†	5,016,895	2,206,400	3,399,594	4,047,600
Linseed cake†	84,000	1,300,000	1,641,000	9,956,200
All other cake†	1,281,750	1,090,988	9,347,265	10,400,029
Wheat fds.*	38,519	11,299	266,865	51,828
Beet pulp*	787	1,100	10,686	5,776
Tankage	4,081	3,872	31,783	14,845
Fish-scrap	8,419	5,342	21,002	14,152
	EXPORTS		6 mos. ended December	
	January 1940	1939	1939	1938
Hay	402	230	1,153	1,471
Cottonseed cake	.....	.....	893	4,981
Linseed cake	7,491	21,668	98,423	104,219
Other oil cake	.....	720	3,677	8,494
Cottonseed meal	193	364	4,572	10,909
Linseed meal	747	981	5,845	3,528
Babassu cake and meal	100	.....	1,068	100
Soybean oil cake meal	8,047	3,275	27,529	.....
Other oil meal cake	2,376	647	2,760	33,771
Fish meal	40	12	176	985
Mxd. dairy & poultry fds.	582	806	5,526	5,884
Oyster shells	1,464	6,024	23,823	23,234
Other prepared & mxd. fds.	214	313	1,647	9,468
Other feed, bran	508	2,294	6,317	12,446
Kafir, milo (bus.)	9	.....	1,084	375,996

\*2,000 lb. tons. †Pounds.

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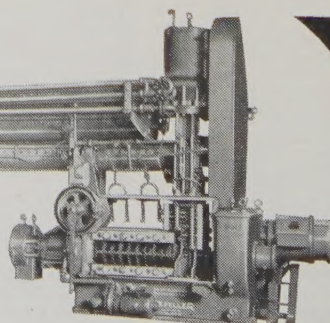
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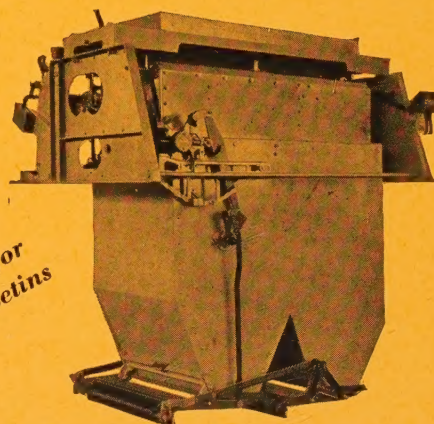
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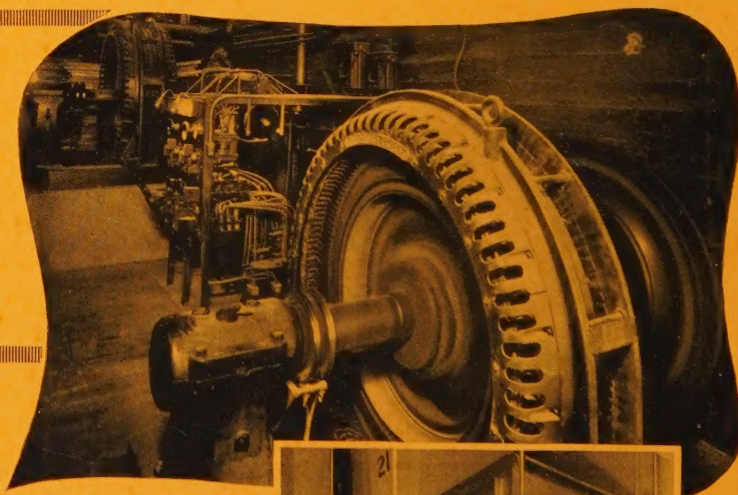
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Above—An F-M 7 1/2-h.p. enclosed fan-cooled motor driving a feed mixer.



Left—Typical installation of a 10-h.p. totally enclosed, fan-cooled F-M motor.

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